

## SCHEDULE 1.2

### DEFINITIONS

**“9-1-1”** means the services described in Section 3.9

**“9-1-1 Control Office Software Enhancement Connection Charge”** is as defined in Section 3.9.2(e) of this Agreement.

**“Access Toll Connecting Trunks”** is as defined in Section 5.1.

**“Act”** means the Communications Act of 1934 (47 U.S.C. § 151 et seq.), as amended by the Telecommunications Act of 1996, and as from time to time interpreted in the duly authorized rules, regulations and applicable orders of the FCC or the Commission having authority to interpret the Act within its state of jurisdiction.

**“ADSL”** or **“Asymmetrical Digital Subscriber Line”** means a transmission technology which transmits an asymmetrical digital signal using one of a variety of line codes.

**“Advanced Intelligent Network”** or **“AIN”** is a network functionality that permits specific conditions to be programmed into a switch which, when met, directs the switch to suspend call processing and to receive special instructions for further call handling in order to enable carriers to offer advanced features, and services.

**“Affiliate”** is As Defined in the Act.

**“AMA”** means the Automated Message Accounting structure inherent in switch technology that initially records telecommunication message information. AMA format is contained in the Automated Message Accounting document, published by **Belcore** as GR-I 100-CORE which defines the industry standard for message recording.

**“Applicable Laws”** is as defined in Section 19.2.

**“As Defined in the Act”** means as specifically defined by the Act and as from time to time interpreted in the duly authorized rules and regulations of the FCC or the Commission.

**“As Described in the Act”** means as described in or required by the Act and as from time to time interpreted in the duly authorized **rules** and regulations of the FCC or the Commission.

**“Automatic Location Identification”** or **“ALI”** means a feature by which the service **address** associated with the calling party’s listed telephone number identified by **ANI**, as defined herein, is forwarded to the **PSAP** for display. Additional telephones with the same number **as**

the **calling** party's, including secondary locations and off-premise extensions, will be identified with the service address of the calling party's listed number.

**“Automatic Number Identification”** or **“ANI”** means a Feature Group D signaling parameter which refers to the number transmitted through a network identifying the **billing** number of the calling party. With respect to 9-1-1 and **E9-1-1**, **“ANI”** means a feature by which the calling party's telephone number is automatically forwarded to the **E9-1-1** Control Office and to the PSAP display and transfer office.

**“Automatic Route Selection”** or **“ARS”** means a service feature associated with a specific grouping of lines that provides for automatic selection of the least expensive or most appropriate transmission facility for each call based on criteria programmed into the system.

**“Bellcore”** means Bell Communications Research, Inc.

**“Bill Date”** means the date that a bill is issued by a Party.

**“BLV/BLVI Traffic”** means an operator service call in which the caller inquires as to the busy status of or requests an interruption of a call on another Customer's Telephone Exchange Service line.

**“Business Day”** means a day on which banking institutions are required to be open for business in Chicago, Illinois.

**“Bona Fide Request”** means the process described on **Schedule 2.2**.

**“Calling Party Number”** or **“CPN”** is a Common Channel Interoffice Signaling (**“CCIS”**) parameter which refers to the number transmitted through a network identifying the calling party.

**“Capacity”** is as defined in **Section 16.1.2**

**“Carrier of Record”** is as defined in **Section 10.11.3**.

**“CCS”** means one hundred (100) call seconds.

**“Central Office Switch”** means a switch used to provide Telecommunications Services, including:

(a) **“End Office Switches,”** which are used to terminate Customer station Loops for the purpose of Interconnection to each other and to trunks; and

(b) **“Tandem Office Switches”** or **“Tandems,”** which are used to connect and switch trunk circuits between and among other Central Office Switches.

A Central Office Switch may also be employed as a combination End Office/Tandem Office Switch.

**“Centrex”** means a Telecommunications Service associated with a specific grouping of lines that uses Central Office switching equipment for call routing to handle direct dialing of calls and to provide many private branch exchange-like features.

**“CLASS Features”** means certain **CCIS-based** features available to Customers, including: Automatic Call Back; Caller Identification and related blocking features: Distinctive Ringing/Call Waiting; Selective Call Forward; and Selective Call Rejection.

**“Commercial Mobile Radio Service” or “CMRS”** is As Defined in the Act.

**“COBO”** is as defined in Section 12.12.2(b).

**“Collocation”** is As Described in the Act.

**“Combination”** is as defined in Section 9.3.

**“Commission”** or “ICC” means the Illinois Commerce Commission.

**“Common Channel Interoffice Signaling” or “CCIS”** means the signaling system, developed for use between switching systems with stored-program control, in which all of the signaling information for one or more groups of trunks is transmitted over a dedicated high-speed data link rather than on a per-trunk basis and, unless otherwise agreed by the Parties, the CCIS used by the Parties shall be SS7.

**“Consequential Damages”** is as defined in Section 26.5.

**“Contract Month”** means a calendar month (or portion thereof) during the term of this Agreement. Contract Month 1 shall commence on the first day of the first calendar month following the Effective Date **and** end on the last day of that calendar month.

**“Contract Year”** means a twelve (12)-month period during the term of this Agreement commencing on the Effective Date **and each anniversary thereof**.

**“Control Office”** means the Central Office providing Tandem Switching Capability for E9-1-1 calls. The Control Office controls switching of ANI information to the PSAP and also provides the Selective Routing, feature, standard speed calling features, call transfer capability and certain maintenance functions for each PSAP.

**“Cross Connection”** means a connection provided pursuant to Collocation at the Digital Signal Cross Connect. Main Distribution Frame or other suitable frame or panel between (i) the collocated Party’s equipment and (ii) the equipment of a third-party collocated

Telecommunications Carrier or the equipment or facilities of the other Party which provides such Collocation.

**“Customer”** means a third-party residence or business that subscribes to Telecommunications Services provided by either of the Parties.

**“Customer Listing(s)”** means a list containing the names, the telephone numbers, addresses and zip codes of Customers within a defined geographical area, except to the extent such Customers have requested not to be listed in a directory.

**“Customer Name and Address Information” or “CNA”** means the name, service address and telephone numbers of a Party’s Customers for a particular Exchange Area. CNA includes nonpublished listings, coin telephone information and published listings.

**“Customer Proprietary Network Information”** is As Defined in the Act.

**“Customer Usage Data”** is as defined in Section 10.16.1.

**“Dark Fiber”** means fiber facilities that have no electronics (i.e., no transmission equipment at either end).

**“Data Management System” or “DMS”** means a system of manual procedures and computer processes used to create, store and update the data required to provide the Selective Routing (“SR”) and ALI features.

**“Delaying Event”** means (a) any failure of a Party to perform any of its obligations set forth in this Agreement, caused in whole or in part by (i) the failure of the other Party to perform any of its obligations set forth in this Agreement (including the Implementation Schedule and the Implementation Plan), or (ii) any delay, act or failure to act by the other Party or its Customer, agent or subcontractor or (b) any Force Majeure Event.

**“Delivery Date”** is as defined in Sections 12.12.2(b) and 12.12.3(c).

**“Derivative Information”** is as defined in Section 20.1.1(b).

**“Dialing Parity”** is As Defined in the Act.

**“Digital Signal Level”** means one of several transmission rates in the time-division multiplex hierarchy.

**“Digital Signal Level 0” or “DSO”** means the 64 Kbps zero-level signal in the time-division multiplex hierarchy.

**“Digital Signal Level 1” or “DS1”** means the 1.544 Mbps first-level signal in the time-division multiplex hierarchy. In the time-division multiplexing hierarchy of the telephone network, DS1 is the initial level of multiplexing.

**“Digital Signal Level 3” or “DS3”** means the 44.736 Mbps third-level in the time-division multiplex hierarchy. In the time-division multiplexing hierarchy of the telephone network, DS3 is defined as the third level of multiplexing.

**“Disclosing Party”** is as defined in Section 20.1.1.

**“Dispute”** is as defined in Section 28.3.1.

**“Disputed Amounts”** is as defined in Section 28.1.1.

**“Documentation of Authorization”** is as defined in Schedule 10.11.1.

**“Emergency Services”** mean police, fire, ambulance, rescue and medical services.

**“E9-1-1” or “Enhanced 9-1-1 (E9-1-1) Service”** provides completion of 9-1-1 calls via dedicated trunking facilities and includes Automatic Number Identification (ANI), Automatic Location Identification (ALI) and/or Selective Routing (SR).

**“equal in quality”** is as defined in Section 3.6.

**“Exchange Access”** is As Defined in the Act.

**“Exchange Area”** means an area, defined by the Commission, for which a distinct local rate schedule is in effect.

**“Exchange Message Record” or “EMR”** means the standard used for exchange of Telecommunications message information among Telecommunications providers for billable, non-billable, sample, settlement and study data. EMR format is contained in **Belcore** Practice BR-010-200-010 CRIS Exchange Message Record.

**“FCC”** means the Federal Communications Commission.

**“Fiber-Meet”** means an Interconnection architecture method whereby the Parties physically Interconnect their networks via an optical fiber interface (as opposed to an electrical interface) at a mutually **agreed-upon** location, at which one Party’s responsibility or service begins and the other Party’s responsibility ends.

**“Force Majeure Event”** is as defined in Section 30.5.

**“Forecast Provider”** is as defined in Section 19.5.3.

**“Grandfathered Services”** is as defined in Section 10.3.1.

**“Hazardous Substances”** is as defined in Section 19.4.

**“HDSL” or “High-Bit Rate Digital Subscriber Line”** means a transmission technology which transmits up to a DSL-level signal, using any one of the following line codes: 2 Binary / 1 Quaternary (**“2B1Q”**), Carrierless AM/PM, Discrete Multitone (**“DMT”**), or 3 Binary / 1 Octet (**“3B1O”**).

**“Implementation Plan”** is as defined in Section 18.2.

**“Implementation Team”** is as defined in Section 18.1.

**“Incumbent Local Exchange Carrier”** or **“ILEC”** is As Defined in the Act.

**“Information Service Traffic”** means Local Traffic or IntraLATA Toll Traffic which originates on a Telephone Exchange Service line and which is addressed to an information service provided over a Party’s information services platform (e.g., 976).

**“Initial Billing Company”** or **“IBC”** means the Local Exchange Carrier which provides the Feature Group B or D services in an End Office. For purposes of this Agreement, QST is the IBC.

**“Initial Term”** is as defined in Section 21.1.

**“Integrated Digital Loop Carrier”** means a subscriber loop carrier system that is twenty-four (24) local Loop transmission paths combined into a 1.544 Mbps digital signal which integrates within the switch at a DSL level.

**“Integrated Services Digital Network”** or **“ISDN”** means a switched network service that provides end-to-end digital connectivity for the simultaneous transmission of voice and data. Basic Rate Interface-ISDN (**BRI-ISDN**) provides for a digital transmission of two 64 Kbps bearer channels and one 16 Kbps data channel (2B1D).

**“Intellectual Property”** means copyrights, patents, trademarks, trade-secrets, mask works and all other intellectual property rights.

**“Interconnection”** is As Defined in the Act.

**“Interconnection Activation Date”** is as defined in Section 2.1.

**“Interconnection Point”** is as defined in Section 3.2.2.

**“Interexchange Carrier”** or **“MC”** means a carrier that provides interLATA or intraLATA Telephone Toll Services.

**“Interim Telecommunications Number Portability”** or **“INP”** is as described in the Act.

**“InterLATA”** is As Defined in the Act.

**“IntraLATA Toll Traffic”** means all intraLATA calls other than Local Traffic calls.

**“Line Information Data Base(s)”** or **“LIDB”** means one or all, as the context may require, of the Line Information Data Bases owned individually by ILECs and other entities which provide, among other things, calling card validation functionality for telephone line number cards issued by Ameritech. A LIDB also contains validation data for collect and third number-billed calls, which include billed number screening.

**“Listing Update(s)”** means information with respect to Customers necessary for Publisher to publish directories under this Agreement in a form and format acceptable to Publisher. For Customers whose telephone service has changed since the last furnished Listing Update because of new installation, disconnection, change in address, change in name, change in non-listed or non-published status, or other change which may affect the listing of the Customer in a directory, Listing Updates shall also include information necessary in order for Publisher to undertake initial delivery and subsequent delivery of directories, including mailing addresses, delivery addresses and quantities of directories requested by a Customer. In the case of Customers who have transferred service from another LEC to QST without change of address, Listing Updates shall also include the Customer’s former listed telephone number and former LEC, if available. Similarly, in the case of Customers who have transferred service from QST to another LEC, Listing Updates shall also include the Customer’s referral telephone number and new LEC, if available.

**“Local Access and Transport Area”** or **“LATA”** is As Defined in the Act.

**“Local Exchange Carrier”** or **“LEC”** is As Defined in the Act.

**“Local Loop Transmission”** or **“Loop”** means the transmission path which extends from the Network Interface Device or demarcation point at a Customer’s premises to the Main Distribution Frame or other designated frame or panel in a Party’s Wire Center or Switching Center which serves the Customer. Loops are defined by the electrical interface rather than the type of facility used.

**“Local Number Portability”** or **“LNP”** means the ability of users of Telecommunications Services to retain, at the same location, existing telephone numbers without impairment of quality, reliability, or convenience when switching from one Telecommunications Carrier to another.

**“Local Traffic”** means a call the distance of which is fifteen (15) miles or less as calculated by using the V&H coordinates of the originating NXX and the V&H coordinates of the terminating NXX or as otherwise determined by the FCC or Commission for purposes of Reciprocal Compensation; provided, that in no event shall a Local **Traffic** call be greater than fifteen (15) miles as so calculated.

**“Loss”** or “Losses” means any and all losses, costs (including court costs), claims, damages (including fines, penalties, and criminal or civil judgments and settlements), injuries, liabilities and expenses (including attorneys’ fees).

**“Main Distribution Frame”** means the distribution frame of the Party providing the Loop used to interconnect cable pairs and line and trunk equipment terminals on a switching system.

**“Make-Ready Work”** means all work, including rearrangement or transfer of existing facilities or other changes required to accommodate QST’s Attachments.

**“MECAB”** refers to the Multiple Exchange Carrier Access Billing (**MECAB**) document prepared by the Billing Committee of the Ordering and Billing Forum (**OBF**), which functions under the auspices of the Carrier Liaison Committee (**CLC**) of the Alliance for Telecommunications Industry Solutions (**ATIS**). The **MECAB** document published by **Bellcore** as Special Report SR-BDS-000983 contains the recommended guidelines for the billing of an access service provided by two or more **LECs**, or by one **LEC** in two or more states within a single **LATA**.

**“Meet-Point Billing”** means the process whereby each Party bills the appropriate tariffed rate for its portion of a jointly provided Switched Exchange Access Service.

**“Multiple Bill/Single Tariff”** means that each Party will prepare and render its own meet point bill in accordance with its own tariff for its portion of the switched access service.

**“Network Element”** is As Defined in the Act.

**“North American Numbering Plan”** or **“NANP”** means the numbering plan used in the United States that also serves Canada, Bermuda, Puerto Rico and certain Caribbean Islands. The NANP format is a IO-digit number that consists of a 3-digit NPA code (commonly referred to as the area code), followed by a 3-digit NXX code and 4-digit line number.

**“Number Portability”** is As Defined in the Act.

**“NXX”** means the three-digit code which appears as the first three digits of a seven-digit telephone number.



**“OBF”** means the Ordering and Billing Forum (OBF), which functions under the auspices of the Carrier Liaison Committee (CLC) of the Alliance for Telecommunications Industry Solutions (ATIS).

**“Occupancy Date”** is as defined in Section 12.12.2(f).

**“Optical Line Terminating Multiplexor” or “OLTM”** is as defined in Section 3.3.

**“Party”** means either Ameritech or QST, and **“Parties”** means Ameritech and QST.

**“Physical Collocation”** is As Defined in the Act.

**“PIC”** means primary Interexchange Carrier.

**“Premises”** is As Defined in the Act.

**“Primary Listing”** means the single directory listing provided to Customers by Publisher under the terms of this Agreement. Each telephone configuration that allows a terminating call to hunt for an available time among a series of lines shall be considered a single Customer entitled to a single primary listing.

**“Proprietary Information”** is as defined in Section 20.1.1.

**“Public Safety Answering Point” or “PSAP”** means an answering location for 9-1-1 calls originating in a given area. A PSAP may be designated as Primary or Secondary, which refers to the order in which calls are directed for answering. Primary PSAPs **respond** first; Secondary PSAPs receive calls on a transfer basis only, and generally serve as a centralized answering location for a particular type of emergency call. PSAPs are staffed by employees of Service Agencies such as police, fire or emergency medical agencies or by employees of a common bureau serving a group of such entities,

**“Publisher”** means Ameritech’s White Pages Directories publisher.

**“QST Directory Customer”** is as defined in Section 15.1.

**“Rate Center”** means the specific geographic point which has **been** designated by a given LEC as **being** associated with a particular NPA-NXX code which has been assigned to the LEC for its provision of Telephone Exchange Service. The Rate Center is the **finite** geographic point identified by a specific V&H coordinate, which is used by that LEC to measure, for billing purposes, distance sensitive transmission services associated with the specific Rate Center; provided that a Rate Center cannot exceed the boundaries of an Exchange Area as defined by the Commission.

**“Receiving Party”** is as defined in Section 20.1.1.

**“Reciprocal Compensation”** is As Described in the Act.

**“Referral Announcement”** is as defined in Article XVII.

**“Renewal Term”** is as defined in Section 21.1.

**“Resale Listing(s)”** means a list containing the names, the telephone numbers, addresses and zip codes of Customers of QST within the defined geographic area, except to the extent such Customers of QST have requested not to be listed in a directory.

**“Resale Services”** is as defined in Section 10.3.

**“Resale Tariff”** is as defined in Section 10.11.2.

**“Routing Point”** means a location which an LEC has designated on its own network as the homing (routing) point for inbound traffic to one or more of its NPA-NXX codes. The Routing Point is also used to calculate mileage measurements for the distance-sensitive transport element charges of Switched Exchange Access Services. Pursuant to Bellcore Practice BR 795-100-100 (the “BP Practice”), the Routing Point (referred to as the **“Rating Point”** in such RP Practice) may be an End Office Switch location, or a **“LEC Consortium Point of Interconnection.”** Pursuant to such RP Practice, each **“LEC Consortium Point of Interconnection”** shall be designated by a common language location identifier (CLLI) code with (x)KD in positions 9, 10 and 11, where (x) may be any alphanumeric A-Z or O-9. The Routing Point must be located within the LATA in which the corresponding NPA-NXX is located. However, Routing Points associated with each NPA-NXX need not be the same as the corresponding Rate Center, nor must there be a unique and separate Routing Point corresponding to each unique and separate Rate Center; provided only that the Routing Point associated with a given NPA-NXX must be located in the same LATA as the Rate Center associated with the NPA-NXX.

**“Selective Routing”** or **“SR”** means an E9-1-1 feature that routes an E9-1-1 call from a Control Office to the designated Primary PSAP based upon the identified number of the calling party.

**“Service Agency”** means the public agency, the State or any local government unit or special purpose district which has the authority to provide police, fire fighting, medical or other emergency services, which has requested the local telephone company to provide an E9-1-1 Telecommunications Set-vice for the purpose of voice-reporting emergencies by the public.

**“Service Control Point”** or **“SCP”** is As Defined in the Act.

**“Service Lie”** means a telecommunications link from the Central Office terminating at the PSAP.

**“Shared Tenant Service Agreement”** means the provision of centralized Telecommunications Services to tenants within the same building or a complex of buildings.

**“Signaling End Point”** or **“SEP”** means a signaling point, other than an **STP**, which serves as a source or a repository for CCIS messages.

**“Signal Transfer Point”** or **“STP”** is As Defined in the Act.

**“Subsequent Billing Company”** or **“SBC”** means the Local Exchange Carrier which provides a segment of transport or switching services in connection with Feature Group B or D switched access service. For purposes of this Agreement, Ameritech is initially the SBC.

**“Sunsetted Services”** is as defined in Section 10.3.2.

**“Switched Access Detail Usage Data”** means a category 1101XX record as defined in the EMR Bellcore Practice BR 010-200-010.

**“Switched Access Summary Usage Data”** means a category 1150XX record as defined in the EMR Bellcore Practice BR 010-200-010.

**“Switched Exchange Access Service”** means the offering of transmission or switching services to Telecommunications Carriers for the purpose of the origination or termination of Telephone Toll Service. Switched Exchange Access Services include: Feature Group A, Feature Group B, Feature Group D, 8001888 access, and 900 access and their successors or similar Switched Exchange Access **Services**.

**“Switching Center”** serves as a Routing Point for Switched Exchange Access and Interconnection Access Service.

**“Synchronous Optical Network”** or **“SONET”** means an optical interface standard that allows inter-networking of transmission products from multiple vendors. The base rate is 51.84 Mbps (OC-LISTS-L) and higher rates are direct multiples of the base rate, up to 13.22 Gpbs.

**“Technical Reference Schedule”** is the list of technical references set forth in Schedule 2.3.

**“Technically Feasible Point”** is As Described in the Act.

**“Telecommunications”** is As Defined in the Act.

**“Telecommunications Act”** means the Telecommunications Act of 1996 and any rules and regulations promulgated thereunder.

**“Telecommunications Assistance Program”** means any means-tested or subsidized Telecommunications Service offering, including Lifeline, that is offered only to a specific category of subscribers.

**“Telecommunications Carrier”** is As Defined in the Act.

**“Telecommunications Service”** is As Defined in the Act

**“Telephone Exchange Service”** is As Defined in the Act.

**“Telephone Relay Service”** means ‘a service provided to speech-and hearing-impaired callers that enables such callers to type a message into a telephone set equipped with a keypad and message screen and to have a live operator read the message to a recipient and then type the message recipient’s response to the speech-or hearing-impaired caller.

**“Telephone Toll Service”** is As Defined in the Act.

**“Unauthorized Switching”** is as defined in Section 10.11.2.

**“Virtual Collocation”** is As Defined in the Act.

**“White Pages Directories”** means directories or the portion of co-bound directories which include a list in alphabetical order by name of the telephone numbers and addresses of telecommunication company customers.

**“Wholesale Resale Services”** is as defined in Section 10.1.

**“Wire Center”** means the Premises of a Party at which all Customer Loops within a defined geographic area are converged. Such Loops may be served by one (1) or more Central Office Switches within such Premises, The Wire Center serves as a Routing Point for Switched Exchange Access Service.

## SCHEDULE 2.1

### IMPLEMENTATION SCHEDULE ILLINOIS

#### 1. Interconnection

LATA	Ameritech Interconnection Point	QST Interconnection Point	Interconnection Activation Date
368	PEORILPJ5TT	PEORILGSDSO	To be determined for all LATAs in accordance with the procedures set forth in <u>Section 3.4.4</u>

## SCHEDULE 2.2

### BONA FIDE REQUEST

1. Ameritech shall promptly consider and analyze the submission of a Bona Fide Request that Ameritech provide: (a) Interconnection, access to an unbundled Network Element (including Combinations thereof) not otherwise provided hereunder at the time of such request; (b) an Interconnection or connection to a Network Element that is different in quality to that which Ameritech provides itself at the time of such request; or (c) a customized service for features, capabilities, functionalities or unbundled Network Elements not otherwise provided hereunder at the time of such request.
2. A Bona Fide Request shall be submitted in writing and shall include a technical description of each requested Interconnection. Network Element. Combination and/or customized feature, capability or functionality.
3. Ameritech shall provide QST a good faith estimate of costs to process **QST's** Bona Fide Request quote within five (5) business days of receipt of **QST's** request. QST may cancel a Bona Fide Request at any time, but shall pay Ameritech's reasonable and demonstrable costs of processing and/or implementing the Bona Fide Request up to the date of cancellation, except if (i) any processing charges are of the type which are not generally passed on by Ameritech to its retail or resale Customers and (ii) such costs or cost categories representing such charges are not included in the prices. QST pays for the services provided by Ameritech under this Agreement.
4. Within five (5) Business Days of its receipt, Ameritech shall acknowledge receipt of the Bona Fide Request.
5. Within thirty (30) days of its receipt of a Bona Fide Request, Ameritech shall provide to QST a preliminary analysis of such Interconnection, Network Element, or requested level of quality thereof that is the subject of the Bona Fide Request or customized feature, capability or functionality. The preliminary analysis shall confirm that Ameritech will either offer access to the Interconnection, Network Element, or requested level of quality or will provide a detailed explanation that access to such Interconnection, Network Element, or requested level of quality is not technically feasible and/or that the request does not qualify as an Interconnection, Network Element, or requested level of quality that is required to be provided under the Act. If the receiving Party determines that the Interconnection, Network Element, or requested level of quality that is the subject of the Bona Fide Request is technically feasible and is otherwise required to be provided under the Act, Ameritech shall provide QST a **firm** price proposed and availability date for such development ("**Bona Fide Request Quote**"). For Bona Fide Requests that involve either: (i) combinations of standard offerings or (ii) individual customer arrangements that do not require alterations not otherwise performed for individual customer arrangements, for Ameritech retail Customers. Ameritech shall provide a Bona Fide Request

Quote within such thirty (30)-day period. For all other Bona Fide Requests, Ameritech shall provide a Bona Fide Request Quote as soon as feasible, but in any event not more than one hundred twenty (120) days from the date Ameritech received such Bona Fide Request. The Bona Fide Request Quote provided by Ameritech to QST shall include, at QST's option, either (a) the applicable rates (recurring and nonrecurring) of the requested Interconnection, Network Element, Combination or Customized feature, capability or functionality, which rates shall include the reasonable amortized costs of development of such Interconnection, Network Element, Combination or customized feature, capability or functionality or (b) the reasonable costs of development of the Interconnection, Network Element, Combination or customized feature, capability or functionality listed as a separate charge and the applicable rates (recurring or nonrecurring for such Interconnection, Combination or customized feature, capability or functionality).

6. Within thirty (30) days of its receipt of the Bona Fide Request Quote, the requesting Party must either **confirm** its order for such Interconnection or Network Element pursuant to the Bona Fide Request Quote or, if it believes such quote is inconsistent with the requirements of the Act, exercise its rights under Section 28.3.

7. Unless QST agrees otherwise, all prices shall be consistent with the pricing principles of the Act, FCC and/or the Commission.

8. If a Party to a Bona Fide Request believes that the other Party is not requesting, negotiating, or processing the Bona Fide Request in good faith, or disputes a determination, or price or cost quote, such Party may exercise its rights under Section 28.3.

## SCHEDULE 2.3

### TECHNICAL REFERENCE SCHEDULE

#### Unbundled Network Elements

##### Unbundled Loop Transmission

ANSI **T1.413-1995** Specifications  
ANSI **T1.403-1989**, Carrier to Customer Installation, **DS1** Metallic Interface Specification  
AM TR-TMO-000122  
AM TR-TMO-000123  
Bellcore TR-NWT-000393, Generic Requirements for ISDN Basic Access Digital Subscriber Lines  
ANSI **T1. 102-1993**. American National Standard for Telecommunication - Digital Hierarchy - Electrical Interfaces  
ANSI **T1E1** Committee Technical report Number 28  
Bellcore Technical Requirement TRNWT-000499, Issue 5, December 1993, section 7  
Bellcore TR-TSY-OK008 Digital Interface Between the SLC Digital Loop Carrier System and Local Digital Switch, Issue 2, August 1987  
Bellcore TR-TSY-000673, Operation System Interface for an IDLC System (**LSSGR**) FSD 20-02-2100, Issue 1, September 1989  
Bellcore Integrated Digital Loop Carrier System General Requirements, Objectives and Interface, GR 303-CORE, Issue 1. September 1995

##### Local Switching

Bellcore FR-NWT-000064 (Local Switching Systems General Requirements)  
Bellcore GR-1432-CORE (TCAP)  
Bellcore GR-905-CORE (ISUP)  
Bellcore GR-1429-CORE (Call Management)  
Bellcore GR-1357-CORE (Switched Fractional **DS1**)  
Bellcore GR-1428-CORE (Toll Free Service)  
Bellcore GR- 1597-CORE (Calling Name)  
Bellcore GR-954-CORE (Line Information Database)  
Bellcore GR-2863-CORE (Advanced Intelligent Network)  
GR-1298-CORE, **AIN** Switching System Generic Requirements  
GR-1299-CORE, **AIN** Switch-Service Control Point (**SCP**)/Adjunct Interface Generic Requirements  
TR-NWT-001284. **AIN** 0.1 Switching System Generic Requirements  
SR-NWT-002247, **AIN** Release I Update



ANSI standards Q.931) Q.932

Belcore TR-NWT-08

Belcore TR-NWT-303

TR-NWT-000393, January 1991, Generic Requirements for ISDN Basic Access Digital Subscriber Lines

### Dedicated and Shared Transport

AM TR-NIS-000 111

AM TR-MS-000133

ANSI T1. 101-1994, American National Standard for Telecommunications

-Synchronization Interface Standard Performance and Availability

ANSI T1.102-1993, American National Standard for Telecommunications - Digital Hierarchy - Electrical Interfaces

ANSI T1.105-1995, American National Standard for Telecommunications - Synchronous Optical Network (SONET) - Basic Description including Multiplex Structure, Rates and Formats

ANSI T1. 105.01-1995, American National Standard for Telecommunications -Synchronous Optical Network (SONET) - Automatic Protection Switching

ANSI T1.105.02- 1995 , American National Standard for Telecommunications

-Synchronous Optical Network (SONET) - Payload Mappings

ANSI T1. 105.03-1994, American National Standard for Telecommunications -Synchronous Optical Network (SONET) - Jitter at Network Interfaces

ANSI T1. 105.03a-1995, American National Standard for Telecommunications -Synchronous Optical Network (SONET): Jitter at Network Interfaces - DS 1 Supplement

ANSI T1.105.04-1995, American National Standard for Telecommunications

-Synchronous Optical Network (SONET) - Data Communication Channel Protocols and Architectures

ANSI T1. 105.05-1994, American National Standard for Telecommunications

-Synchronous Optical Network (SONET) - Tandem Connection

ANSI T1. 105.06-199x, American National Standard for Telecommunications

Synchronous Optical Network (SONET) - Physical Layer Specifications

ANSI T1.106-1988, American National Standard for Telecommunications - Digital Hierarchy - Optical Interface Specifications (Single Mode)

ANSI T1.107-1988, American National Standard for Telecommunications Digital Hierarchy - Formats Specifications

ANSI T1.107a-1990, American National Standard for Telecommunications - Digital Hierarchy - Supplement to Formats Specifications (DS3 Format Applications)

ANSI T1.107b-1991, American National Standard for Telecommunications - Digital Hierarchy - Supplement to Formats Specifications

ANSI T1.117-1991, American National Standard for Telecommunications - Digital Hierarchy - Optical Interface Specifications (**SONET**) (Single Mode - Short Reach)

ANSI T1. 119-1994, American National Standard for Telecommunications - Synchronous Optical Network (**SONET**) - Operations, Administration, Maintenance, and Provisioning (**OAM&P**) Communications

ANSI T1. 119.01-1995, American National Standard for Telecommunications -Synchronous Optical Network (**SONET**) - Operations, Administration, Maintenance, and Provisioning (**OAM&P**) Communications Protection Switching Fragment

ANSI T1. 119.02-199x, American National Standard for Telecommunications -Synchronous Optical Network (**SONET**) - Operations, Administration, Maintenance, and Provisioning (**OAM&P**) Communications Performance Monitoring Fragment

ANSI T1.231-1993, American National Standard for Telecommunications - Digital Hierarchy - Layer I In-Service Digital Transmission performance monitoring

ANSI T1.404-1994, Network-to-Customer Installation - DS3 Metallic Interface Specification

**Bellcore** FR-440 and TR-NWT-000499. Transport Systems Generic Requirements (TSGR): Common Requirements

**Bellcore** GR-820-CORE. Generic Transmission Surveillance: **DS1 & DS3** Performance

**Bellcore** **GR-253-CORE**. Synchronous Optical Network Systems (**SONET**); Common Generic Criteria

**Bellcore** TR-NWT 000507, Transmission. Section 7, Issue 5 (Bellcore, December 1993). (A module of **LSSGR**, FR-NWT-000064.)

**Bellcore** TR-NWT-000776, Network Interface Description for ISDN Customer Access

**Bellcore** TR-INS-000342. High-Capacity Digital Special Access Service-Transmission Parameter Limits and Interface Combinations, Issue 1, February 1991

#### Signaling Transfer Points (STPs)

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ANSI T1.111.3

ANSI T1.111.4

ANSI T1.112

ANSI T1.112.4

ANSI T1.118

ANSI T1.111.6

ANSI T1.112.5

**GR-2863-CORE**, CCS Network Interface Specification Supporting Advanced Intelligent Network (**AIN**)

**GR-2902-CORE**, CCS Network Interface Specification (CCSNIS) Supporting Toll-Free Service Using Advanced Intelligent Network (**AIN**)

**Bellcore GR-905-CORE**, Common Channel Signaling Network Interface Specification (CCSNIS) Supporting Network Interconnection, Message Transfer Part (**MTP**), and Integrated Services Digital Network User Part (**ISDNUP**)

**Bellcore GR-1432-CORE**, CCS Network Interface Specification (CCSNIS) Supporting Signaling Connection Control Part (SCCP) and Transaction Capabilities Application Part (TCAP)

ANSI **T1.111-1992**, American National Standard for Telecommunications - Signaling System Number 7 (SS7) - Message Transfer Part (**MTP**)

ANSI **T1.111A-1994**, American National Standard for Telecommunications - Signaling System Number 7 (**SS7**) - Message Transfer Part (**MTP**) Supplement

ANSI **T1.112-1992**, American National Standard for Telecommunications - Signaling System Number 7 (SS7) - Signaling Connection Control Part (**SCCP**)

ANSI **T1.115-1990**, American National Standard for Telecommunications - Signaling System Number 7 (**SS7**) Monitoring and Measurements for Networks

ANSI **T1.116-1990**, American National Standard for Telecommunications - Signaling System Number 7 (SS7) Operations. Maintenance and Administration Part (**OMAP**)

ANSI **T1.118-1992**, American National Standard for Telecommunications - Signaling System Number 7 (SS7) - Intermediate Signaling Network Identification (**ISNI**)

**Bellcore GR-905-CORE**, Common Channel Signaling Network Interface Specification (CCSNIS) Supporting Network Interconnection, Message Transfer Part (**MTP**), and Integrated Services Digital Network User Part (**ISDNUP**)

**Bellcore GR-1432-CORE**, CCS Network Interface Specification (CCSNIS) Supporting Signaling Connection Control Part (SCCP) and Transaction Capabilities Application Part (TCAP)

#### Service Control Points (SCPs)/Call-Related Databases

SR-TSV-002275 (**BOC Notes on the Ameritech Networks**, SR-TSV-002275, Issue 2 (**Bellcore**, April 1994))

GR-246-CORE. Bell Communications Research Specification of Signaling System Number 7, **ISSUE 1** (**Bellcore**, December 1995)

**GR-1432-CORE**, CCS Network Interface Specification (CCSNIS) Supporting Signaling Connection Control Part (SCCP) and Transaction Capabilities Application Part (TCAP). (**Bellcore**, March 1994)

**GR-954-CORE**, CCS Network Interface Specification (CCSNIS) Supporting Line Information Database (**LIDB**) Service 6, Issue 1, Rev. 1 (**Bellcore**, October 1995)

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GR-1158-CORE, OSSGR Section 22.3: Line Information Database 6. Issue (**Bellcore**, October 1995)

GR-1428-CORE, CCS Network Interface Specification (CCSNIS) Supporting Toll Free Service (**Bellcore**, May 1995)

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### Tandem Switching

**Bellcore** TR-TSY-000540. Issue 2R2, Tandem Supplement, 6/1/90

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**GR-1429-CORE**

**GR-2863-CORE**

**GR-2902-CORE**

### Performance Standards

**Bellcore** FR-64, LATA Switching Systems Generic Requirements (LSSGR)

**Bellcore** TR-NWT-000499. Issue 5. Rev 1. April 1992, Transport Systems Generic Requirements (TSGR): Common Requirements

**Bellcore** TR-NWT-000418. Issue 2. December 1992. Generic Reliability Assurance Requirements For Fiber Optic Transport Systems

**Bellcore** TR-NWT-000057, Issue 2. January 1993, Functional Criteria for Digital Loop Carriers Systems

**Bellcore** TR-NWT-000507, Issue 5. December 1993, LSSGR - Transmission, Section 7

**Bellcore** TR-TSY-000511, Issue 2, July 1987. Service Standards, a Module (Section 11) of LATA Switching Systems Generic Requirements (LSSGR, FR-NWT-000064)

**Bellcore** TR-NWT-000393, January 1991, Generic Requirements for ISDN Basic Access Digital Subscriber Lines

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**GR-303-CORE**. Issue I. September 1995, Integrated Digital Loop Carrier System Generic Requirements, Objectives and Interface

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**ANSI T1.105-1995**

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**Bellcore** Generic Requirement GR-49-CORE. "Generic Requirements for Outdoor Telephone Network Interface Devices"

**Bellcore** Technical Requirement TR-NWT-00239, "Indoor Telephone Network Interfaces"

Bellcore Technical Requirement **TR-NWT-000937**, “Generic Requirements for Outdoor  
and Indoor Building Entrance”

Interconnection

Trunking Interconnection

**GR-317-CORE**, Switching System generic requirements for Call Control Using the Integrated Services Digital Network User Part (**ISDNUP**), Bellcore, February, 1994

**GR-394-CORE**, Switching System generic requirements for Interexchange Carrier Interconnection Using the Integrated Services Digital Network User Part (**ISDNUP**), Bellcore, February, 1994

**FR-NWT-000064**, LATA Switching Systems Generic Requirements (**LSSGR**), Bellcore, 1994 Edition

ANSI **T1.111**

ANSI **T1.112**

ANSI **T1.113**

**Bellcore GR-905-CORE**, Common Channel Signaling Network Interface Specification (CCSNIS) Supporting Network Interconnection, Message Transfer Part (**MTP**), and Integrated Services Digital Network User Part (**ISDNUP**)

**Bellcore GR-1428-CORE**, CCS Network Interface Specification (CCSNIS) Supporting Toll-Free Service

**Bellcore GR-1429-CORE**, CCS Network Interface Specification (CCSNIS) **Supporting** Call Management Services

**Bellcore GR-1432-CORE**, CCS Network Interface Specification (CCSNIS) Supporting Signaling Connection Control Part (SCCP) and Transaction Capabilities Application Part (TCAP)

ANSI **T1.110-1992**, American National Standard Telecommunications - Signaling System Number 7 (SS7) - General Information;

ANSI **T1.111-1992**, American National Standard for Telecommunications - Signaling System Number 7 (SS7) - Message Transfer Part (**MTP**)

ANSI **T1.111A-1994**, American National Standard for Telecommunications - Signaling System Number 7 (**SS7**) - Message Transfer Part (**MTP**) Supplement

ANSI **T1.112-1992**, American National Standard for Telecommunications - Signaling System Number 7 (SS7) - Signaling Connection Control Part (SCCP)

ANSI **T1.113-1995**, American National Standard for Telecommunications - Signaling System Number 7 (**SS7**) - Integrated Services Digital Network (**ISDN**) User Part

ANSI **T1.114-1992**, American National Standard for Telecommunications - Signaling System Number 7 (SS7) - Transaction Capabilities Application Part (**TCAP**)

ANSI **T1.115-1990**, American National Standard for Telecommunications - Signaling System Number 7 (SS7) - Monitoring and Measurements for Networks

ANSI T1.116-1990, American National Standard for Telecommunications - Signaling System Number 7 (SS7) - Operations, Maintenance and Administration Part (OMAP)

ANSI T1.118-1992, American National Standard for Telecommunications - Signaling System Number 7 (SS7) - Intermediate Signaling Network Identification (ISNI)

Belcore GR-905-CORE, Common Channel Signaling Network Interface Specification (CCSMS) Supporting Network Interconnection, Message Transfer Part (MTP), and Integrated Services Digital Network User Part (ISDNUP)

Belcore GR-954-CORE, CCS Network Interface Specification (CCSMS) Supporting Line Information Database (LIDB) Service

Belcore Special Report SR-TSV-002275, BOC Notes on the LEC Networks-Signaling Ameritech Supplement AM-TR-OAT-000069, Common Channel Signaling Network Interface Specifications

Belcore Standard FR-NWT-000476

ANSI Standard T1.206

#### Electrical/Optical Interfaces

Belcore Technical Publication TR-INS-000342, High Capacity Digital Special Access Service, Transmission Parameter Limits and Interface Combinations;

Ameritech Technical Publication TR-MS-000111, Ameritech OC3, OC12 and OC48 Service Interface Specifications: and

Ameritech Technical Publication AM-TR-NIS-000133, Ameritech OC3, OC12 and OC48 Dedicated Ring Service Interface Specifications.

#### Collocation

Belcore Network Equipment Building Systems (NEBS) standards TR-EOP-000063

National Electrical Code (NEC) use latest issue

TA-NPL-000286, NEBS Generic Engineering Requirements for System Assembly and Cable Distribution, Issue 2 (Bellcore, January 1989)

TR-EOP-000063, Network Equipment-Building System (NEBS) Generic Equipment Requirements, Issue 3, March 1988

TR-NWT-000840, Supplier Support Generic Requirements (SSGR), (A Module of LSSGR, FR-NWT-000064), Issue 1 (Bellcore, December 1991)

TR-NWT-001275 Central Office Environment Installations/Removal Generic Requirements, Issue 1, January 1993

Institute of Electrical and Electronics Engineers (IEEE) Standard 383, IEEE Standard for Type Test of Class 1 E Electrical Cables, Field Splices, and Connections for Nuclear Power Generating Stations

National Electrical Code (NEC) use latest issue

TA-NPL-000286, NEBS Generic Engineering Requirements for System Assembly and Cable Distribution, Issue 2 (Bellcore, January 1989)

TR-EOP-000063, Network Equipment-Building System (**NEBS**) Generic Equipment Requirements, Issue 3, March 1988

**TR-EOP-000151**, Generic Requirements for 24-, 48-, 130- and 140- Volt Central Office Power Plant Rectifiers, Issue 1 (**Bellcore**, May 1985)

TR-EOP-000232, General Requirements for Lead-Acid Storage Batteries, Issue 1 (**Bellcore**, June 1985)

TR-NWT-000154, General Requirements for 24-, 48-, 130-, and 140- Volt Central Office Power Plant Control and Distribution Equipment, Issue 2 (**Bellcore**, January 1992)

TR-NWT-000295, Isolated Ground Planes: Definition and Application to Telephone Central Offices Issue 2 (Bellcore, July 1992)

TR-NWT-000840, Supplier Support Generic Requirements (SSGR), (A Module of LSSGR, FR-NWT-000064), Issue 1 (**Bellcore**, December 1991)

TR-NWT-001275, Central Office Environment Installations/Removal Generic Requirements, Issue 1, January 1993

Underwriters' Laboratories Standard. UL 94

## SCHEDULE 3.8

### AMERITECH INTERCONNECTION PERFORMANCE BENCHMARKS

#### 1.0 Trunk Provisioning Intervals

##### 1.1 Number of End Office Trunks Per Order

##### Interval

1-48

14 Business Days

49-96

15 Business Days

97 +

Negotiated

##### 1.2 New Trunk Groups to Tandem(s)

Negotiated

#### 2.0 Trunking Grade of Service

##### Blocking Standards

##### Traffic Tvoe

##### Measurement <sup>1/</sup>

Exchange Access Final Trunk Group Traffic  
via Tandems

1/2 of 1% (0.005)

All Other Final Trunk Group Traffic

1% (0.01)

#### 3.0 Trunk Restoral

##### Tvoe of Outage

##### Interval

Service Affecting

within 1 hour

Non-Service Affecting

within 24 hours

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<sup>1/</sup> Measurement of Blocking Standards shall be on a monthly basis.



## SCHEDULE 6.0

### MEET-POINT BILLING PATE STRUCTURE

A. Interstate access - Terminating to or originating from QST Customers served from an QST Switching Center.

Rate Element	Billing Company
CCL	QST
Local Switching	QST
Interconnection Charge	QST
Local Transport (Tandem)	50% Ameritech
Termination	50% QST
Local Transport (Tandem) Facility	This will be calculated based on NECA tariff No. 4 filings for each Party
Tandem Switching	Ameritech
Entrance Facility	Ameritech

B. Intrastate access - Terminating to or originating from QST Customers served from an QST Switching Center.

Rate Element	Billing Company
CCL	QST
Local Switching	QST
Interconnection Charge	QST
Local Transport (Tandem)	50% Ameritech
Termination	50% QST
Local Transport (Tandem) Facility	This will be calculated based on NECA tariff No. 4 filings for each Party
Tandem Switching	Ameritech
Entrance Facility	Ameritech

## SCHEDULE 9.2.1

### LOCAL LOOPS

Subject to **Section 1.1** of Schedule 9.5, Ameritech shall allow QST to access the following Loop types (in addition to those Loops available under applicable tariffs) unbundled from local switching and local transport:

**“2-Wire Analog Voice Grade Loop” or “Analog 2W,”** which supports analog transmission of 300-3000 Hz, repeat loop start, loop reverse battery, or ground start seizure and disconnect in one direction (toward the End Office Switch), and repeat ringing in the other direction (toward the Customer) and terminates in a 2-Wire interface at both the central office MDF and the customer premises. Analog 2W includes Loops sufficient for the provision of PBX trunks, pay telephone lines and electronic key system lines. Analog 2W will be provided in accordance with the specifications, interfaces, and parameters described in Technical Reference AM-TR-TMO-000122. Ameritech Unbundled Analog Loops.

**“4-Wire Analog Voice Grade Loop” or “Analog 4W,”** which supports transmission of voice grade signals using separate transmit and receive paths and terminates in a 4-wire electrical interface at both ends. Analog 4W will be provided in accordance with the specifications, interfaces, and parameters described in Technical Reference AM-TR-TMO-000122, Ameritech Unbundled Analog Loops.

**“2-Wire ISDN 160 Kbps Digital Loop” or “BRI-ISDN,”** which supports digital transmission of two 64-kbps bearer channels and one 16-kbps data channel (2B+D). BRI-ISDN is a 2B+D Basic Rate Interface-Integrated Services Digital Network (BRI-ISDN) Loop which will meet national ISDN standards and conform to Technical Reference AM-TR-TMO-000123, Ameritech Unbundled Digital Loops (including ISDN).

**“2-Wire ADSL-Compatible Loop” or “ADSL 2W”** is a transmission path which facilitates the transmission of up to a 6-Mbps digital signal downstream (toward the Customer) and up to a 640-kbps digital signal upstream (away from the Customer) while simultaneously carrying an analog voice signal. An ADSL-2W is provided over a 2-Wire, non-loaded twisted copper pair provisioned using revised resistance design guidelines and meeting ANSI Standard T1.413-1995 and AM-TR-TMO-000123. An ADSL-2W terminates in a 2-wire electrical interface at the Customer premises and at the Ameritech Central Office frame. ADSL technology can only be deployed over Loops which extend less than 18 Kft from Ameritech's Central Office. ADSL compatible Loops are available only where existing copper facilities can meet the ANSI T1.413-1995 specifications.

**“2-Wire HDSL-Compatible Loop” or “HDSL 2W”** is a transmission path which facilitates the transmission of a 768-kbps digital signal over a 2-Wire, non-loaded twisted copper pair meeting the specifications in ANSI T1E1 Committee Technical Report Number 28. HDSL compatible Loops are available only where existing copper facilities can meet the T1E1 Technical Report Number 28 and AM TR-TMO-000123 specifications.

**“4-Wire HDSL-Compatible Loop”** or **“HDSL 4W”** is a transmission path which facilitates the transmission of a 1.544 Mbps digital signal over two **2-Wire**, non-loaded twisted copper pairs meeting the specifications in ANSI T1E1 Committee Technical Report Number 28 and AM-TR-TMO-000123. HDSL compatible Loops are available only where existing copper facilities can meet the T1E1 Technical Report Number 28 specifications.

**“4-Wire 64-Kbps Digital Loop”** or **“4-Wire 64 Digital”** is a transmission path which supports transmission of digital signals of up to a maximum binary information rate of 64 Kbps and terminates in a **4-Wire** electrical interface at both the Customer premises **and on** the MDF in Ameritech’s Central Office. 4-Wire 64 Digital will be provided in accordance with the specifications, interfaces and parameters described in **AM-TR-TMO-000123**.

**“4-Wire 1.544-Mbps Digital Loop”** or **“1.544-Mbps Digital”** is a transmission path which supports transmission of digital signals of up to a maximum binary information rate of 1.544 Mbps **and** terminates in a 4-Wire electrical interface at the Customer premises and on the DSX frame in Ameritech’s Central Office. **1.544-Mbps** Digital will be provided in accordance with the specifications, interfaces and parameters described in AM-TR-TMO- 00023.

## SCHEDULE 9.2.2

### UNBUNDLED ACCESS TO NETWORK INTERFACE DEVICES

Ameritech's Network Interface Device ("**NID**") is a Network Element that utilizes a **cross-connect** device to connect loop facilities to inside wiring.

Ameritech will permit QST to connect QST's loop to the inside wiring of the Customer's premises through Ameritech's NID, where necessary. QST must establish the connection to Ameritech's **NID** through an adjoining **NID**, which serves as the network interface or demarcation for QST's loop.

Maintenance and control of premises (inside wiring) is under the control of the Customer. Any conflicts between service providers for access to the Customer's inside wire must be resolved by the Customer.

## SCHEDULE 9.2.3

### SWITCHING CAPABILITY

1.0 Local Switching. The local switching capability of a Network Element is defined as:

- (1) line-side facilities, which include the connection between a Loop termination at the Main Distribution Frame and a switch line card;
- (2) trunk-side facilities, which include the connection between trunk termination at a trunk-side cross-connect panel and a switch trunk card; and
- (3) all features, functions, and capabilities of the switch available from the specific port type (line-side or trunk-side port), which include:
  - (a) the basic switching function of connecting lines to lines, lines to trunks, trunks to lines, and trunks to trunks, as well as the same basic capabilities made available to Ameritech's Customers, such as a telephone number, white page listing, dial tone and signalling;
  - (b) access to operator services, directory assistance and 9-1-1; and
  - (c) all other features that the switch provides, including custom calling, CLASS features and **Centrex**, as well as any technically feasible customized routing functions available from such switch.

### 2.0 Tandem Switching

2.1 The Tandem Switching Capability Network Element is defined as:

- (a) an unbundled Network Element in Ameritech's Class 4 non-TOPS digital Tandem Switches, which includes Interconnection with the trunk at the Tandem Distribution Frame ("TDF") and the Tandem Switch trunk ports;
- (b) the basic switching function of creating a temporary transmission path that connects **QST's** trunks to the trunks of **Ameritech, IXCs, ICOs, CMRS**, and other **LECs** interconnected to the Tandem Switch.

2.2 Interconnecting trunk types which can be switched include FGB, FGC, FGD and Type II. Signaling support includes Rotary, MF, and SS7 and any signaling conversions between these signaling formats.

2.3 Variations in Tandem Switching equipment used to provide service in specific locations may cause differences in the operation of certain features.

2.4 The unbundled Tandem Switching Network Element will provide to QST all available basic Tandem Switching functions and basic capabilities that are centralized in the Tandem Switch (and not in End Office Switches), including the following functions Ameritech makes available to its Customers:

2.4.1 Routing of calls from an inbound **trunk** to an outbound trunk based on destination digits.

2.4.2 Routing of Equal Access or Operator Service calls from an inbound trunk to an outbound trunk based on the CIC forwarded by the inbound trunk.

2.5 Translations, screening, blocking, and route indexing are provided if **technically** feasible under the standard switching translations and screening in use in that switch. A request for translations, screening, blocking, route indexing other than what is in use in that switch will be provided where technically feasible as a Bona Fide Request. Ameritech will provide these features if technically feasible and, upon agreement by QST to pay the applicable recurring and non-recurring costs of developing, installing, providing and maintaining the capability. Variations in the Tandem Switching equipment or translation and screening used to provide service in specific locations may cause differences in the operation of the element.

## SCHEDULE 9.2.4

### INTEROFFICE TRANSMISSION FACILITIES

Interoffice Transmission Facilities are Ameritech transmission facilities dedicated to a particular Customer or carrier, or shared by more than one Customer or carrier, that provide Telecommunications Services between Wire Centers/Switching Centers owned by Ameritech or QST, or between Switches owned by Ameritech or QST.

1.0 Ameritech provides several varieties of unbundled Interoffice Transmission Facilities:

1.1, Unbundled dedicated interoffice transport facility (**“Dedicated Transport”**) is a dedicated facility connecting two Ameritech Central Office buildings via Ameritech transmission equipment. In each Central Office building, QST will Cross-Connect this facility to its own transmission equipment (physically or virtually) Collocated in each Wire Center, or to other unbundled Network Elements provided by Ameritech, to the extent the requested combination is technically feasible and is consistent with other standards established by the FCC for the combination of unbundled Network Elements. All applicable digital Cross-Connect, multiplexing, and Collocation space charges apply at an additional cost.

1.2. **“Unbundled** dedicated entrance facility” is a dedicated facility connecting Ameritech’s transmission equipment in an Ameritech Central Office with QST’s transmission equipment in QST’s Switching Center for the purposes of providing Telecommunications Services.

1.3. Shared transport transmission facilities (**“Shared Transport”**) are a billing arrangement where two (2) or more carriers share the features, functions and capabilities of transmission facilities between the same types of locations, as described for dedicated transport in Sections 1.1 and 1.2 preceding, and share the costs.

2.0 Ameritech shall offer Interoffice Transmission Facilities in each of the following ways:

2.1. **As** a dedicated transmission path (e.g., DS1, DS3, OC3, OC12 and OC48).

2.2. As a shared transmission path as described in Section 1.3 above.

2.3 Dark Fiber. QST may only access Ameritech’s Dark Fiber that exists at the time of QST’s request.

2.4 Common Transport. as may be provided by Ameritech pursuant to QST’s Bona Fide Request.

3.0 Where Dedicated Transport or Shared Transport is provided it shall include (as appropriate):

3.1. The transmission path at the requested speed or bit rate.

3.2. The following optional features are available, if requested by QST, at additional cost:

3.2.1. Clear Channel Capability per 1.544-Mbps (DS1) bit stream;

3.2.2. Ameritech-provided Central Office multiplexing.

(a) DS3 to DSI multiplexing; and

(b) DS1 to Voice/Base Rate/128-, 256-, 384-Kpbs Transport; multiplexing

3.3. If requested by QST, the following are available at an additional cost:

3.3.1. 1 + 1 Protection for OC3, OC12 and OC48;

3.3.2. 1 + 1 Protection with Cable Survivability for OC3, OC12 and OC48;

3.3.3. 1 + 1 Protection with Route Survivability for OC3, OC12 and OC48.

4.0 Technical Requirements. This Section sets forth technical requirements for all Interoffice Transmission Facilities.

4.1. When Ameritech provides Interoffice Transmission Facilities as a circuit, the entire designated transmission facility (e.g., DS1, DS3, and OC3) shall be dedicated to QST-designated traffic.

4.2. Ameritech shall offer Interoffice Transmission Facilities in all then-currently available technologies, including DS1 and DS3 transport systems, SONET Bi-directional Line Switched Rings, SONET Unidirectional Path Switched Rings, and SONET point-to-point transport systems (including linear add-drop systems), at all available transmission bit rates, except subrate services, where available.

4.3. For DS1 facilities, Interoffice Transmission Facilities shall, at a minimum, meet the performance, availability, jitter, and delay requirements specified for Customer Interface to Central Office "CI to CO" connections in the applicable technical references set forth under Dedicated and Shared Transport in the Technical Reference Schedule.

4.4. For DS3 facilities, and higher rate facilities, Interoffice Transmission Facilities shall, at a minimum, meet the performance, availability, jitter, and delay requirements specified for Customer Interface to Central Office "CI to CO" connections in the applicable technical references set forth under Dedicated and Shared Transport in the Technical Reference Schedule.



4.5. When requested by QST, Interoffice Transmission Facilities shall provide physical diversity. Physical diversity means that two circuits are provisioned in such a way that no single failure of facilities or equipment will cause a failure on both circuits.

4.6. When physical diversity is requested by QST, Ameritech shall provide the maximum feasible physical separation between **intra-office** and inter-office transmission paths (unless otherwise agreed by QST).

4.7. Any request by QST for diversity shall be subject to additional charges pursuant to this Agreement and applicable tariffs.

4.8. Ameritech shall offer the following interface transmission rates for Interoffice Transmission Facilities:

4.8.1. **DS1** (Extended SuperFrame - ESF and D4);

4.8.2. **DS3** (C-bit Parity and M13 shall be provided);

4.8.3. **SONET** standard interface rates in accordance with the applicable ANSI technical references set forth under Dedicated and Shared Transport in the Technical Reference Schedule.

4.9. Ameritech shall permit, to the extent technically feasible and at applicable rates, QST to obtain the functionality provided by DCS together with and separate from dedicated transport in the same manner that Ameritech offers such capabilities to **IXCs** that purchase transport services. If QST requests additional functionality, such request shall be made through the Bona Fide Request process.

4.10. Upon QST's request, Ameritech shall provide QST with electronic provisioning control of an QST specified Dedicated Transport through Ameritech Network Reconfiguration Service (**ANRS**) on the rates, terms and conditions in F.C.C. Tariff No.

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## SCHEDULE 9.2.5

### SIGNALING NETWORKS AND CALL-RELATED DATABASES

1.0 Signaling Transfer Points. A Signaling Transfer Point (STP) is a signaling network function that includes all of the capabilities provided by the signaling transfer point switches (STPSs) and their associated signaling links which enable the exchange of SS7 messages among and between switching elements, database elements and signaling transfer point switches.

#### 1.1. Technical Requirements.

1.1.1. STPs shall provide access to all other Network Elements connected to Ameritech SS7 network. These include:

1.1.1.1. Ameritech Local Switching or Tandem Switching;

1.1.1.2. Ameritech Service Control Points/Databases;

1.1.1.3. Third-party local or tandem switching systems; and

1.1.1.4. Third-party-provided STPSs.

1.1.2. The connectivity provided by STPs shall fully support the functions of all other Network Elements connected to the Ameritech SS7 network. This explicitly includes the use of the Ameritech SS7 network to convey messages which neither originate nor terminate at a Signaling End Point directly connected to the Ameritech SS7 network (i.e., transient messages). When the Ameritech SS7 network is used to convey transient messages, there shall be no alteration of the Integrated Services Digital Network User Part (ISDNUP) or Transaction Capabilities Application Part (TCAP) user data that constitutes the content of the message.

1.1.3. If an Ameritech Tandem Switch routes calling traffic, based on dialed or translated digits, on SS7 trunks between an QST local switch and third-party local switch, the Ameritech SS7 network shall convey the TCAP messages that are necessary to provide Call Management features (Automatic Callback, Automatic Recall, and Screening List Editing) between the QST local STPSs and the STPSs that provide connectivity with the third-party local switch, even if the third-party local switch is not directly connected to the Ameritech STPSs, based on the routing instruction provided in each message,

1.1.4. STPs shall provide all functions of the MTP as specified in ANSI T1.111. This includes:

1.1.4.1. Signaling Data Link functions, as specified in ANSI T1.111.2:

1.1.4.2. Signaling Link functions, as specified in ANSI T1.111.3; and

1.1.4.3. Signaling Network Management functions, as specified in ANSI T1.111.4.

1.1.5. **STPs** shall provide all functions of the SCCP necessary for Class 0 (basic connectionless) service, as specified in ANSI T1.112. In particular, this includes Global Title Translation (**GTT**) and SCCP Management procedures, as specified in T1.112.4. In cases where the destination signaling point is an Ameritech local or tandem switching system or database, or is an QST or third-party local or tandem switching system directly connected to the Ameritech SS7 network, **STPs** shall perform final **GTT** of messages to the destination and SCCP Subsystem Management of the destination. In all other cases, **STPs** shall perform intermediate **GTT** of messages to a gateway pair of STPSs in an SS7 network connected with the Ameritech SS7 network. and shall not perform SCCP Subsystem Management of the destination.

1.1.6. **STPs** shall also provide the capability to route SCCP messages based on ISNI, as specified in ANSI T1.118, when this capability becomes available on Ameritech STPSs.

1.1.7. **STPs** shall provide all functions of the OMAP commonly provided by STPSs. This includes:

1.1.7.1. MTP Routing Verification Test (**MRVT**); and

1.1.7.2. SCCP Routing Verification Test (**SRVT**).

1.1.8. In cases where the destination signaling point is an Ameritech local or tandem switching system or database, or is an QST or third-party local or tandem switching system directly connected to the Ameritech SS7 network, **STPs** shall perform MRVT and SRVT to the destination signaling point. In all other cases, **STPs** shall perform MRVT and SRVT to a gateway pair of STPSs in an SS7 network connected with the Ameritech SS7 network. This requirement shall be superseded by the specifications for Intemetwork MRVT and SRVT if and when these become approved ANSI standards and available capabilities of Ameritech **STPSs**.

1.1.9. **STPs** shall be equal to or better than the following performance requirements:

1.1.9.1. MTP Performance, as specified in ANSI T1.111.6; and

1.1.9.2. SCCP Performance, as specified in ANSI T1.112.5.

## 1.2. Signaling Link Transport.

1.2.1. Definition. Signaling Link Transport is a set of two (2) or four (4) dedicated ~~56-Kbps~~ transmission paths between QST-designated Signaling Points of Interconnection (SPOI) that provides appropriate physical diversity.

Technical Requirements.

1.2.2. Signaling Link Transport shall consist of full duplex mode 56-Kbps transmission paths.

1.2.3. Of the various options available. Signaling Link Transport shall perform in the following two (2) ways:

- a) As an “A-link,” which is a connection between a switch or SCP and a Signaling Transfer Point Switch (SIPS) pair; and
- b) As a “D-link,” which is a connection between two (2) **STP** mated pairs in different company networks (e.g., between two (2) **STPS** pairs for two Competitive Local Exchange Carriers (**CLECs**)).

1.2.4. Signaling Link Transport shall consist of two (2) or more signaling link layers as follows:

- a) An A-link layer shall consist of two (2) links:
- b) A D-link layer shall consist of four (4) links

1.2.5. A signaling link layer shall satisfy a performance objective such that:

- a) There shall be no more than two (2) minutes down time per year for an A-link layer: and
- b) There shall ~~be~~ negligible (less than two (2) seconds) down time per year for a D-link layer.

1.2.6. A signaling link layer shall satisfy interoffice and intraoffice diversity of facilities and equipment, such that:

- a) No single failure of facilities or equipment causes the failure of both links in an A-link layer (i.e., the links should be provided on a minimum of two (2) separate physical paths end-to-end); and
- b) No two (2) concurrent failures of facilities or equipment shall cause the failure of all four (4) links in a D-link layer (i.e., the links should be provided on a minimum of three (3) separate physical paths end-to-end).

1.2.7. Interface Requirements. There shall be a **DS1** (1.544 **Mbps**) interface at the QST-designated SPOI. Each 56 Kbps transmission path shall appear as a DSO channel within the **DS1** interface.

## 2.1. Toll-Free Database Services.

2.1.1. Call Routing Service. The Call Routing Service provides for the identification of the carrier to whom a call is to be routed when a toll-free (1 + **800-NXX-XXXX** or **1+888-NXX-XXXX**) call is originated by Customer. **This** function uses the dialed digits to identify the appropriate carrier and is done by screening the full ten digits of the dialed number. The Call Routing Service may be provided in conjunction with a Customer's **InterLATA** or **IntraLATA** Switched Exchange Access Service.

When 800 Call-Routing service is provided, an originating call is suspended at the first switching office equipped with a Service Switching Point (SSP) component of the **SSC/SS7** Network. The SSP launches a query over signaling links (A-links) to the Signal Transfer Point (SIP), and from there to the SCP. The SCP returns a message containing the identification of the carrier to whom the call should be routed and the call is processed.

QST's **SS7** network is used to transport the query from its End Office to the Ameritech SCP. Once QST's identification is provided, QST may use the information to route the toll-free traffic over its network. In these cases, Ameritech Switched Access services are not used to deliver a call to QST. The toll-free carrier ID data may not be stored for **QST's** future use.

2.1.2. Routing Options. In addition to the toll-free service offerings, new routing options are offered. These options are purchased by toll-free service providers to allow their clients to define complex routing requirements on their toll-free service. Toll-free routing options allow the service provider's Customer to route its toll-free calls to alternate carriers and/or destinations based on time of day, day of week, specific dates or other criteria. These routing options are in addition to the basic toll-free call routing requirements which would include the toll-free number, the **intraLATA** carrier, the **interLATA** carrier and the Area of Service (AOS).

2.1.3. Carrier Identification. QST may choose the **800** Carrier Identification service to obtain toll-free number screening. With this service, QST will launch a query to the Ameritech database using its own Service Switching Points (**SSPs**) network. In contrast to the Call Routing Service described in Section 2.1.1 above, with the 800 Carrier Identification service, no routing is performed.

2.1.4. Number Administration. QST, at its option, may elect to use **Ameritech's** toll-free Service, which includes toll-free Number Administration Service (NAS). With this service, Ameritech will perform the Responsible Organization service, which involves interacting with the national Service Management System (**SMS/800**), on behalf of the Customer. Responsible Organization services include

activating, deactivating and maintaining 800/888 number records, as well as trouble referral and clearance. If QST does not select NAS, QST will perform the Responsible Organization service.

## 2.2. LIDB Database Service.

2.2. 1. The Line Information Database (**LIDB**) Query Response Service is a validation database system. It enables QST to offer alternately billed services to its Customers. The database provides an efficient way to validate calling cards and toll billing exception (TBE) (i.e., restricts a collect or third-party-billed call). Toll fraud protection and reduced call set-up expenses are among the benefits of the service.

2.2.2. Billing information records include the Customer name, phone number security personal identification numbers and third-party acceptance indications. Prior to call completion, a query is launched to the LIDB to determine the validity of the requested billing method. The call is then completed or denied, based on the **LIDB's** response.

## 2.3. Local Number Portability

2.3.1. Ameritech's provision of **LNP** will utilize LRN switch software based on requirements developed by the workshop participants and concurred in by the Commission. These requirements are fully compliant with the principles adopted by the FCC in its First Report and Order, CC Docket No. 95-116 (the "Number Portability Order"). The detailed description and technical specifications for the planned **LRN** implementation can be found in various documents produced by the FCC Local Number Portability workshop.

2.3.2. Ameritech is fully prepared to provide LNP database access to QST. However, in adopting its Number Portability Order, the FCC referred certain technical issues to the North American Numbering Council (NANC) and issued a further notice addressing the recovery of costs associated with LNP implementation. Until these activities are concluded, Ameritech cannot finalize product descriptions and rates for access to its LNP database. Nonetheless, Ameritech is willing to begin discussions through the Implementation Team with QST to discuss **QST's** access to Ameritech's **LNP** databases in lieu of constructing **QST's** own.

## 2.4. Unbundled **AIN** Application Process.

2.4.1. The **AIN** architecture establishes a network infrastructure in which subscriber services can be defined and implemented independent from End-Office Switches. This is accomplished by a combination of SS7 signaling, interfaces between Network Elements and call-state models through which **AIN** Network Elements interact.

2.4.2. Ameritech's Unbundled **AIN** (Advanced Intelligent Network) Applications Access service will enable QST (whether it purchases unbundled switching capabilities from Ameritech or owns its own SSP (Service Switching Point)) to offer its Customers **AIN** services without first having to deploy a full **AIN** infrastructure within its own networks. Ameritech will make available existing **AIN** retail applications, as well as newly created services that QST creates via the Ameritech **AIN** Service Creation Environment (SCE) Access service. Unbundled **AIN** Applications Access provides for the **AIN** functionality necessary for the day-to-day ongoing call processing associated with a specific **AIN** applications execution. This includes the **SS7** transport and SCP processing of the query associated with the specific service.

2.4.3. Associated with the **AIN** SCP is a Service Creation Environment (SCE) and a Service Management System (SMS). Ameritech offers access to the Ameritech SMS and SCE capabilities via two (2) **AIN** offerings: **AIN** Service Creation Environment Access Service and **AIN** Service Management System Access Service.

2.4.4. Carriers will share the common **AIN** infrastructure components provided by Ameritech, such as a Service Control Point (SCP), a Signaling Transfer Point (STP), Service Management System (SMS), and, if QST purchases Unbundled Switching from Ameritech, the **AIN** Service Switching Point (SSP). QST shall be responsible for assuring the compatibility of its **AIN** SSP software generics with the Ameritech **AIN** Applications and SCP software releases. Interconnection of the QST SSP with the Ameritech **SS7** network is required, and can be accomplished in a number of ways,

2.4.5. Activation of the desired application at the Ameritech SCP requires subscription by both the ordering carrier QST and the end-user. In general, **AIN** operations require close cooperation between Ameritech and the requesting carrier.

2.4.6. The SSP and SCP vendors provide logical capabilities which Ameritech uses to create each **AIN** service. The SSP and SCP vendors have no knowledge of the specific **AIN** Applications that Ameritech has created. Ameritech's **AIN** deployment is based on **AIN** 0.1.

### 3.1. **AIN** Service Creation Environment Access Service.

Access to Ameritech's **AIN** service creation functionality will be provided in a nondiscriminatory manner to QST to enable it to create new **AIN** services on Ameritech's network. If QST has a new **AIN** service concept, it can utilize all or some of the features below to obtain a fully functional **AIN** service. Subsections 3.1.1 through 3.1.10 list the logical steps of the **AIN** Service Creation Environment Access Service. When this service is ordered by QST, QST shall be responsible for the steps described in Subsections 3.1.1, if applicable, and Ameritech shall, subject to QST's payment of applicable charges, be responsible for the steps described in subsections 3.1.5 through 3.1.10.

3.1.1. Service Concept Description. The description of service idea should detail requirements such as dialing patterns, information exchange, announcements, voice prompts, expected service management screens and reports, and CPE requirements.

3.1.2. Creation of Technical Specification. Translation of a new service description into a technical specification including engineering requirements for Ameritech's network. The technical specification must detail how the service interacts in the network, translated in network terms, should include any expected/anticipated feature interaction discrepancies, and will include the process flows on how the service traverses the network.

3.1.3. Service Logic Design. The development of service design from SCP perspective to include Algorithms. Data Structures and Flow Diagrams.

3.1.4. Service Logic Coding. Development of machine logic in the SCE to include tables. SIBBs, and other elements as necessary.

3.1.5. Service Logic Testing. Service logic testing isolated within the SCE ensure accuracy of compilation and code development, and compliance with Ameritech's AIN environment.

3.1.6. SMS Interface Reauirements. Development of QST SMS interface access including screens, flow-through interface and reports. This is required to allow QST to activate. update. modify. and administer Customer data associated with the new service.

3.1.7. Platform Access Logic Configuration. Service specific updates to global infrastructure required to enable new service. Includes modification of the access logic to enable a new service.

3.1.8. Service Inteeration Testing (SIL). Intensive laboratory testing of service in conjunction with all Ameritech Switch types and or provider switch types and generics (as necessary) to minimize potential feature interaction conflicts and negative network reactions.

3.1.9. Network Implementation. Conditioning of the SMS, SCP, SSP, or STP to accept service including network translations, signaling connectivity, dialing plans, and coordination of provisioning process.

3.1.10. Field Testing. Comprehensive controlled testing in live switch environment, possibly at QST's SSP location.

### 3.2. AIN Service Management System Access Service.

3.2.1. Access to Ameritech's AIN service management system functionality will be provided in a non-discriminatory manner to QST to enable it to manage AIN services located wholly within Ameritech's network (SCP & SSP) or to manage



**AIN** services where the service logic is located within **Ameritech's** SCP and the Customer is served from QST's **AIN** compatible SSP. Upon request of QST, Ameritech shall provide QST the unbundled **AIN** Applications Access service product description and a list of existing Ameritech **AIN** applications.

3.2.2. The Service Management System (SMS) is the administration system for the service logic and data in the Advanced Intelligent Network (**AIN**) Service Control Point (SCP). The SMS contains the master copy of service-level, subscriber-level and subscription-level data. The SMS also contains a copy of the service logic.

Logical access to the SMS will be managed by a set of programs designed by Ameritech. These programs provide security for the data that resides on the **AIN** platforms by allowing user access to only specific data that is appropriate to the customer or carrier. Whether explicitly stated in this document or not, all access to the SMS is managed through these programs. The only exceptions to managed access to SMS functionality are for the Ameritech Network Services organizations that administer the **AIN** platforms. They require direct access in order to appropriately administer the platforms.

Access to SMS functionality will be provided through interface programs that will be developed for specific services. QST will have access to all of the data that the service requires in order to administer that service for its Customers. This includes service level, subscriber level, and subscription level data, as well as any reports and measurement data that are mutually agreed upon by Ameritech and QST.

3.2.3. Service Logic. The SMS receives a copy of the service logic and service management logic from the Service Creation Environment (SCE) system. After population of specific network level and service level data, the SMS downloads a view of the service logic to the designated **SCPs**. The service management logic remains in the SMS to complement SMS utilities in the monitoring and administration of a specific service.

It is required that all of the service creation unit testing, System Integration Lab (SIL) testing and Network Deployment Testing has been completed.

Depending on the service, it may be necessary for QST to negotiate timing and supply service specific data before that service can be deployed in the appropriate **SCPs**. Ameritech, however, is totally responsible for service logic deployment and initial SCP memory load in its network.

3.2.4. Service Administration. Service administration involves the management of service-level data which the service logic requires for its execution. SMS supports the management of service-specific common data. Generally, any changes to the data representation of the Ameritech network which impact one or more carrier services will be administered by Ameritech. Other QST-specific or **service-specific** data changes will be identified and administered by QST.

## SCHEDULE 9.2.6

### OPERATIONS SUPPORT SYSTEMS FUNCTIONS

1.0 Pre-Ordering, Ordering and Provisioning. Ameritech will use the interface described in Section 10.13.2(a) (including the separate interface used for ordering prior to the **first** quarter of 1997) for the transfer and receipt of data necessary to perform the pre-ordering, ordering, and provisioning functions (e.g., order entry, telephone number and due date selection). However, the Access Services Request (ASR) interface will be used for the transfer of information concerning the Network Elements and Combinations which QST intends to order in a specific Wire Center/Switching Center ("Footprint" or "Trunk Side Information").

2.0 Maintenance and Repair. Ameritech will use the interface described in Section 10.13.3(a) for the transfer and receipt of data necessary to perform the maintenance and repair functions (e.g., trouble receipt and trouble status).

3.0 Billing. Ameritech will provide appropriate usage data to QST to facilitate Customer billing with attendant acknowledgments and status reports and exchange information to process claims and adjustments.

## SCHEDULE 9.2.7

### OPERATOR SERVICES AND DIRECTORY SERVICES

1.0 Ameritech shall provide QST Operator Services including the following services at parity with itself. Affiliates and subsidiaries.

1.1 Manual Call Assistance manual call processing with operator involvement for the following:

- (a) Calling card - the Customer dials 0+ or 0- and provides operator with calling card number for billing purposes.
- (b) Collect - the Customer dials 0+ or 0- and asks the operator to bill the call to the called number: provided such billing is accepted by the called number.
- (c) Third number billed - the Customer dials 0+ or 0- and asks the operator to bill the call to a different number than the calling or called number.
- (d) Operator assistance providing local and intraLATA operator assistance for the purposes of:
  - (1) assisting Customers requesting help in completing calls or requesting information on how to place calls;
  - (2) handling emergency calls;
  - (3) handling credits and coin telephone local refund requests; and
  - (4) handling person-to-person calls.
- (e) Operator Transfer Service (“OTS”) - calls in which the Customer dials “0”, is connected to an Ameritech operator and then requests call routing to an IXC subscribing to OTS. The operator will key the IXC’s digit carrier identification code to route the Customer to the requested IXC’s point of termination.
- (f) BLV - Service in which operator verifies a busy condition on a line.
- (g) BLVI - service in which operator, after verifying a busy line, interrupts the call in progress.

1.2 Automated Call Assistance mechanized call processing without operator involvement for the following:

(a) Automated calling card service (“**ACCS**”) the Customer dials 0 and a telephone number, and responds to prompts to complete the billing information. ACCS calculates charges, relates the charge to the Customer, and monitors coins deposited before connecting the 1 + **intraLATA** or **interLATA** call.

(b) Automated Alternate Billing Service (“**AABS**”) - the Customer dials 0 and a telephone number and responds to prompts to process the call and complete the billing information (Customer branding not currently available).

1.3 Line Information Database (“**LIDB**”) Validation - mechanized queries to a LIDB for billing validation.

1.4 Database Access - To the extent technically feasible, Ameritech will provide access to databases (e.g., Operator Reference Information) used in the provisioning of Operator Services via QST’s Bona Fide Request.

2.0 Directory Assistance. Directory Assistance (“DA”) service shall consist of the following services.

2.1 Directory Assistance those calls in which the Customer dials digits designated by QST to obtain Directory Assistance for local numbers located within his/her local calling area.

2.2 Branding - the ability to put messages on the front end of a DA call that is directly **trunked** into Ameritech’s DA switch, or to choose not to provide such a message.

2.3 Information Call Completion - provides a Customer who has accessed the DA service and has received a number from the Audio Response Unit (“**ARU**”) the option of having an **intraLATA** call completed by pressing a specific digit on a touch tone telephone. Information Call Completion is currently available to QST if it direct trunks its DA calls to Ameritech. Upon request and to the extent technically feasible, call completion to the requested number for local and **intraLATA** toll calls shall be sent to the network specified by QST without the need to route through direct trunks. QST shall rate and bill its Customers for Information Call Completion calls.

2.4 Upon request, and through a technically feasible arrangement, Ameritech will provide access to databases used in the provisioning of DA via QST’s Bona Fide Request at rates that recover Ameritech’s costs of developing, providing and maintaining the service. Such unbundled access to the DA database shall be for the purpose of having QST’s Telephone Exchange Service DA listing in the area placed into Ameritech’s DA database. or to enable QST to read DA listing in the database that QST can provide a Telecommunications Service consistent with Section **251(c)(3)** of the Act.

3.0 Rate Application. Ameritech shall bill QST the applicable rates on a monthly basis, in accordance with the following methodology:

3.1 Manual Call Assistance - operator call occurrences multiplied by the per-call rate. Total call occurrences shall include all processed calls whether or not they are completed.

3.2 Automated Call Assistance (ACCS and AABS) - call occurrences multiplied by the per-call occurrence rate. Total call occurrences shall include all processed calls, whether or not they are completed.

3.3 LIDB Validation validation occurrences multiplied by the **LIDB** validation per-occurrence rate. Total validation occurrences shall include all validations, whether or not the call is completed. Ameritech will accumulate operator occurrences, automated occurrences, and **LIDB** validation occurrences via its Operator Services Call Analysis System ("OSCAS"). OSCAS utilizes TOPS AMA recordings to produce monthly summaries of mechanized and manual call occurrences.

3.4 BLV - operator call occurrences multiplied by the per-call rate. Total call occurrences shall include all processed calls, whether or not they are completed.

3.5 BLVI - operator call occurrences multiplied by the per-call rate. Total call occurrences shall include all processed calls. whether or not they are completed.

3.6 Lost Records. If Ameritech is responsible for lost, destroyed, or mutilated TOPS AMA recordings. Ameritech will not bill QST for those calls for which there are no records. Likewise. Ameritech shall not be held responsible by QST for lost revenue. However. if within ninety (90) days, actual data should become available, Ameritech will bill QST for those calls using actual data.

## SCHEDULE 9.3.4

### COMBINATIONS

#### 1. Unbundled Element Platform with Operator Services and Directory Assistance.

Unbundled Loop  
Local Switching  
Operator Services and Directory Assistance  
Shared Transport  
Dedicated Transport  
**STPs**  
Signaling Link Transport  
Service Control Points (SCPs)/Databases  
Tandem Switching

#### 2. Loos Combination

Unbundled Loop  
Network Interface Device

#### 3. Switching Combination #1

Shared Transport  
Dedicated Transport  
**STPs**  
Signaling Link Transport  
Service Control Points (SCPs)/Databases  
Tandem Switching

## SCHEDULE 9.3.5

### COMBINATIONS AVAILABLE THROUGH BONA FIDE REQUEST

#### 1. Loop/Network Combination

Unbundled Loop

Shared Transport

Dedicated Transport

**STPs**

Signaling Link Transport

Service Control Points (SCPs)/Databases

Tandem Switching

#### 2. Switching Combination #2

Network Interface Device

Local Switching

Shared Transport

Dedicated Transport

**SS7** Message Transfer & Connection Control

Signaling Link Transport

Service Control Points (SCPs)/Databases

Tandem Switching

#### 3. Switching Combination #3

Network Interface Device

Local Switching

**Operator** Systems

Shared Transport

Dedicated Transport

**SS7** Message Transfer & Connection Control

Signaling Link Transport

Service Control Points (SCPs)/Databases

Tandem Switching

#### 4. Switched Data Services

Network Interface Device

Local Switching

Shared Transport

Dedicated Transport

Tandem Switching

#### 5. Unbundled Element Platform Without Operator Services and Director?, Assistance

Unbundled Loop

Local Switching

Shared Transport

Dedicated Transport

**STPs**

Signaling Link Transport

Service Control Points (SCPs)/Databases

Tandem Switching



## SCHEDULE 9.5

### PROVISIONING OF NETWORK ELEMENTS

#### 1.0 General Provisioning Requirements.

1.1 Subject to the terms of Article IX, QST may order and/or request Elements either individually or as Combinations.

The Combinations set forth on Schedule 9.3.4 and any additional Combination provided previously hereunder by Ameritech pursuant to the Bona Fide Request process may thereafter be identified and described by QST so that it can be ordered and provisioned as a Combination and **shall** not require the enumeration of each Network Element within that, Combination on each provisioning order; provided that in each case QST shall specify on each order the type of service to be provided as well as any necessary engineering and routing characteristics (e.g., redundancy requirements and data transfer rates) QST requests for such Combination.

QST may order from Ameritech multiple individual Network Elements on a single order without the need to have QST send an order for each such Network Element if such Network Elements are (i) for a single type of service, (ii) for a single location and (iii) for the same account.

1.2 Ameritech ~~shall~~ provide provisioning services to QST Monday through Friday from 8:00 a.m. to 5:00 p.m. CST. QST may request Ameritech to provide Saturday, Sunday, holiday, and/or off-hour provisioning services. If QST requests that Ameritech perform provisioning services at times or on days other than as required in the preceding sentence, Ameritech shall quote, within three (3) Business Days of the request, a **cost-based** rate for such services. If QST accepts Ameritech's quote, Ameritech shall perform such provisioning services.

1.3 Ameritech shall provide a Single Point of Contact (each, a **"SPOC"**) for ordering ~~and~~ provisioning contacts and order flow involved in the purchase and provisioning of Ameritech's unbundled Network Elements or Combinations. **The SPOCs** shall provide an electronic interface twenty-four (24) hours a day, seven (7) days a week for all ordering and provisioning order flows. Each **SPOC shall** also provide to QST a **toll-free** nationwide telephone number (operational from 8:00 a.m. to **5** p.m., Monday through Friday), which **will** be answered by capable staff **trained** to answer questions and resolve problems in connection with the provisioning of Network Elements or Combinations.

1.4 Ameritech shall provide to QST a single point of contact (the **"Unbundling Ordering Center"**) for ordering unbundled Network Elements. A national **toll-free** number will be provided from 7:00 a.m. to 5:00 p.m. CST, Monday through Friday. This Unbundling Ordering Center is responsible for order acceptance, order issuance, and return of the Firm Order Commitment (**"FOC"**) to QST as specified in this Schedule 9.5.

In addition, Ameritech shall provide to QST a single point **of** contact (the “**Unbundling Service Center**”) for all provisioning, maintenance, repair, and cutover coordination. A national toll-free number will be provided from 6:30 a.m. to 12:00 midnight CST Monday through Friday. Out-of-hours maintenance questions are handled by a “**Fold Down Center**.”

1.5 Ameritech will recognize QST as the Customer of Record of all Network Elements and agreed-to Combinations ordered by QST and will send all notices, invoices and pertinent Customer information directly to QST.

1.6 When requested by QST, Ameritech **will** schedule installation appointments with Ameritech’s representative on the line with QST’s representative until QST has access to Ameritech’s scheduling system.

1.7 Ameritech will provide QST with a (“**FOC**”) for each order **within** forty-eight (48) hours of Ameritech’s receipt of that order, or within a different time interval agreed upon by the Implementation Team. The FOC must contain an enumeration of QST’s ordered Network Elements or Combination features, options, physical Interconnection, quantity, and Ameritech commitment date for order completion (“**Committed Due Date**”), which commitment date shall be established on a non-discriminatory basis with respect to installation dates for comparable orders at such time.

1.8 Upon work completion, Ameritech will electronically provide QST (unless otherwise notified by QST) with an order completion per order that states when that order was completed. Ameritech shall respond with specific order detail as enumerated on the FOC and shall state any additional charges (e.g., time and materials charges) up to a previously agreed upon limit associated with that order.

1.9 As soon as identified, Ameritech shall electronically provide notification of QST orders that are incomplete or incorrect and therefore cannot be processed.

1.9.1 Ameritech will perform pre-testing of Network Elements and Combinations in accordance with Ameritech’s standards. At QST’s request, Ameritech will make available to QST on a weekly batch basis any available test and turn-up results in support of the Network Elements or Combinations ordered by QST. QST shall **be** responsible for any costs, as determined in accordance with the Act, incurred by Ameritech to provide copies of any available results. If QST requests Ameritech to provide QST with any test or turn-up results which Ameritech does not then generate, QST shall request such results through the **Bona Fide** Request process.

1.10 As soon as identified, Ameritech shall provide notification electronically of any instances when Ameritech’s Committed Due Dates are in jeopardy of not being met by Ameritech on any element or feature contained in any order for Network Elements or Combinations. Ameritech **shall** indicate its new committed due date as soon as such date is available.

1.10.1 Within twenty-four (24) hours of QST's request, Ameritech will perform cooperative testing with QST (including troubleshooting to isolate any problems) to test Network Elements or Combinations purchased by QST in order to identify any performance problems.

1.11 Subject to **Article IX**, Network Elements and Combinations will be provisioned with a combination of customer-specific and bulk orders, as specified by QST.

1.11.1 When QST orders Network Elements or Combinations that provide the same functionality as a bundled (resold) service, and which are currently interconnected and functional and remain interconnected to the same adjacent Network Elements, such Network Elements and Combinations will remain interconnected and functional without any disconnection or disruption of functionality. There shall be no charge for such interconnection, except for any applicable service charge.

1.12 Ameritech shall provide to QST upon request:

- (a) a list of all services and features technically available from each switch that Ameritech may use to provide Local Switching, including whether the switch has the capability of supporting Inter-and IntraLATA PICs by switch CLI;
- (b) a listing by street address detail, of the service coverage area of each switch CLI;
- (c) when available, all engineering design and layout information for each Network Element and Combination: provided that QST shall pay Ameritech for the costs, as determined in accordance with the Act, incurred by Ameritech to provide QST with copies of such information;
- (d) a listing of all technically available functionalities for each Network Element or Combination; and
- (e) advanced information on the details and requirement for planning and implementation of NPA splits.

1.13 Promptly after the Effective Date<sup>1/</sup>, Ameritech shall provide QST an initial electronic copy of the following information:

- (a) Street address verification;
- (b) Switch identification by service address; and
- (c) Switch feature verification.

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<sup>1</sup> Because the terms of this Agreement are the result of QST's adoption under Section 252(i) of the Act of the MCI Agreement, the Parties agree that the term "Effective Date", for purposes of this **Section 1.13 of Schedule 9.5**, shall mean July 20, 1998.

Electronic updates to such information shall be provided monthly to QST as changes are made to such information.

1.14 For order of Network Elements (and **INP** with the Installation of a Loop) that require coordination among Ameritech, QST and **QST's** Customer. QST shall be responsible for any necessary coordination with the QST Customer.

1.15 Provided QST has appropriate Documentation of Authorization, Ameritech shall recognize QST as an agent for the subscriber in coordinating the disconnection of services provided by another CLEC or Ameritech.

#### 1.16 Order Rejections

Ameritech shall reject and return to QST any order that Ameritech cannot provision, and in its reject notification provide an error code identifying the reasons for which the order was rejected

#### 1.17 Service Order Changes

1.17.1 If an installation or other QST-ordered work requires a change from the original QST service order in any manner. Ameritech shall call QST in advance of performing the installation or other work to obtain authorization. Ameritech shall then provide QST an estimate of additional labor hours and/or materials. After all installation or other work is completed. Ameritech shall notify QST of actual labor hours and/or materials used in accordance with regular service order completion schedules.

1.17.2 If an QST Customer requests a service change at the time of installation or other work being performed by Ameritech on behalf of QST. Ameritech, while at the Customer premises, shall direct the QST Customer to contact QST so as to avoid unnecessary delays in service activation should the Ameritech representative leave the Customer premises.

### 2.0 Unbundled Local Loop Transmission

#### 2.1 Access to Unbundled Local Loops.

2.1.1 QST shall access Ameritech's Unbundled Local Loops via Collocation or in accordance with Article IX of this Agreement at the Ameritech Wire Center where that element exists and each Loop shall be delivered to **QST's** Collocation by means of a Cross-Connection, which shall be an additional charge.

2.1.2 Ameritech shall provide QST access to its unbundled Loops at each of Ameritech's Wire Centers. In addition, if QST requests one or more Loops serviced by Integrated Digital Loop Carrier or Remote Switching technology deployed as a Loop concentrator. Ameritech shall, where available, move the requested Loop(s) to a spare. existing physical Loop at no charge to QST. If, however, no spare physical Loop is available, Ameritech shall within forty-eight

(48) hours of QST's request notify QST of the lack of available facilities. QST may then at its discretion make a Bona Fide Request for Ameritech to provide the unbundled Loop through the demultiplexing of the integrated digitized Loop(s). Notwithstanding anything to the contrary in this Agreement, the provisioning intervals set forth in Section 2.2.2 of this Schedule and the Ameritech Network Element Performance Benchmarks set forth in **Schedule 9.10** of this Agreement shall not apply to unbundled Loops provided under this Section 2.1.2.

2.1.3 If QST orders a Loop type and the distance requested on such Loop exceeds the transmission characteristics as referenced in the corresponding Technical Reference specified below, distance extensions may be requested where technically feasible to meet the specification using such distance extensions and additional rates and charges shall apply as set forth at Item V of the Pricing Schedule.

Loop T y p e	Technical Reference/Limitation
Electronic Key Line	2.5 miles
ISDN	Belcore TA-NWT-000393
HDSL 2W	T1E1 Technical Reoort Number 28
HDSL 4W	T1E1 Technical Report Number 28
ADSL 2w	ANSI T1.413-1995 Snecitication

## 2.2 Provisioning of Unbundled Loops.

The following coordination procedures shall apply for conversions of "live" Telephone Exchange Services to unbundled Network Elements:

2.2.1 QST shall request unbundled Loops from Ameritech by delivering to Ameritech a valid electronic transmittal service order (a **"Service Order"**) using the electronic interface described in Schedule 9.2.6. Within forty-eight (48) hours of Ameritech's receipt of a Service Order, Ameritech shall provide QST the FOC date according to the applicable Ameritech Network Element Performance Benchmarks set forth in **Section 9.10** of this Agreement by which the Loop(s) covered by such Service Order will be installed.

2.2.2 Ameritech shall provision unbundled Loops in accordance with the time frames set forth on **Schedule 9.10** or within such other intervals as agreed upon by the Parties.

2.2.3 Ameritech agrees to coordinate with QST at least forty-eight (48) hours prior to the due date a scheduled conversion date and time (the **"Scheduled Conversion Tie"**) within a three (3) hour period (the **"Loop Conversion Window"**).

2.2.4 Not less than one (1) hour prior to the Scheduled Conversion Tie, either Party may contact the other Party and unilaterally designate a new Scheduled Conversion Time (the “New **Conversion** Time”). If the New Conversion Time is within the Loop Conversion Window, no charges shall be assessed on or waived by either Party. If, however, the New Conversion Time is outside of the Loop Conversion Window, the Party requesting such New Conversion Time shall be subject to the following:

If Ameritech requests the New Conversion Time, the applicable Line Connection Charge shall be waived: and

If QST requests the New Conversion Time, QST shall be assessed a Line Connection Charge in addition to the Line Connection Charge that will be incurred for the New Conversion Time.

2.2.5 Except as otherwise agreed by the Parties for a specific conversion, the Parties agree that the time interval expected from disconnection of “live” Telephone Exchange Service to the connection of an unbundled Network Element at the QST Collocation interface point will be thirty (30) minutes or less. If a conversion interval exceeds thirty (30) minutes and such delay is caused solely by Ameritech (and not by a QST contributing Delaying Event), Ameritech shall waive the applicable Line Connection Charge for such element. If QST has ordered INP with the installation of a Loop, Ameritech will coordinate the implementation of INP with the Loop conversion during the thirty (30)-minute interval at no additional charge.

2.2.6 Requests for maintenance or repair of unbundled Loops are initiated using the industry standard “**electronic bonding**” interface (**EBI**) and are handled by the Ameritech Unbundling Service Center (“**USC**”), The USC works with local Ameritech personnel to perform any manual testing that may be required to isolate the trouble.

2.2.7 Ameritech shall test for QST dial tone (“**Dial Tone Test**”) at Ameritech’s MDF for QST’s Virtual Collocated Equipment or Physical Collocated equipment during a window not greater than forty-eight (48) hours but not less than eight (8) hours prior to the Scheduled Conversion Tie (or New Scheduled Time, as applicable). Ameritech shall perform the Dial Tone Test at no charge until the end of Contract Year One (1).<sup>1/</sup> Thereafter, **Ameritech shall** charge QST for Dial Tone Test based on the mutual agreement of the Parties.

### 3.0 Network Interface Device Capability.

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<sup>1</sup> Because the terms of this Agreement are the result of QST’s adoption under Section 252(i) of the Act of the MCI Agreement, the Parties agree that the term “Contract Year One (1)”, for purposes of this **Schedule 9.5**, shall expire on July 19, 1999.

3.1 Ameritech **will** provide QST access to **NIDs** in a manner that **will** permit QST to connect its loop facilities to the Customer's inside wiring through Ameritech's **NID**, as required. QST shall establish this connection through an adjoining **NID** provided by QST.

3.2 Due to the wide variety of **NIDs** utilized by Ameritech (based on Customer size and environmental considerations). QST may access the Customer's inside wire by any of the following means:

- (a) Where an adequate length of inside wire is present and environmental conditions permit, QST may remove the inside wire from Ameritech's **NID** and connect that wire to QST's **NID**;
- (b) Enter the Customer access chamber or "**side**" of "**dual chamber**" **NID** enclosures for the purpose of extending a connector&d or spliced jumper wire from the inside wire through a suitable "**punch-out**" hole of such **NID** enclosures;
- (c) Enter Ameritech's loop terminal enclosure located at a multiple dwelling unit ("**MDU**") for the purpose of accessing Customer premises inside wire and extending such wire to QST's own adjoining **NID**; or
- (d) Request Ameritech, to make other rearrangements to the inside wire terminations or terminal enclosure on a time and materials cost basis to be charged to the requesting party (i.e., QST, its agent, the building owner or the Customer).

3.3 If QST accesses the Customer's inside wire as described in **Section 2.2(d)**, the time and materials charges will be billed to the requesting party (i.e., QST, the building owner or the Customer).

3.4 In no case shall QST remove or disconnect Ameritech's loop facilities from Ameritech's **NIDs**, enclosures. or protectors.

3.5 In no case shall QST remove or disconnect ground wires from Ameritech's **NIDs**, enclosures, or protectors.

3.6 Maintenance and control of premises wiring (inside wire) is the responsibility of **the Customer**. Any conflicts between service providers for access to the Customer's inside wire must be resolved by the Customer.

3.7 Due to the wide variety of **NID** enclosures and outside plant environments, **Ameritech** will work with QST to develop specific procedures to establish the most effective means of implementing this **Section 3.0**.

## 4.0 Unbundled Local Switching

### 4.1 Access to Unbundled Local Switching.

4.1.1 QST shall access Ameritech's Unbundled Local Switching via Collocation or in accordance with Article IX of this Agreement at the Ameritech Wire Center where that element exists and each line-side and/or trunk-side port will be delivered to QST by means of a Cross-Connection, which shall be an additional charge.

4.1.2 Ameritech shall provide QST access to its Unbundled Local Switching at each of Ameritech's Wire Centers and will provide QST (i) all available basic local switching functions and basic capabilities that the switch provides or (ii) for which Ameritech Operations Support Systems functions are capable of provisioning pursuant to a Bona Fide Request.

4.1.3 Unbundled Local Switching also provides access to additional features and capabilities that the switch has available for activation. QST has the capability of activating these features on a line-by-line basis via an electronic interface. The additional features available for activation on the basic Unbundled Local Switching include:

- (a) vertical features;
- (b) Custom Calling, Custom Local Area Signaling Service features ("CLASS") features; and
- (c) Centrex features,

4.1.4 Other basic and/or additional capabilities, functions and features that the switch is capable of providing, but which **Ameritech** does not currently provide, may be requested as optional special capabilities. Ameritech will provide these special capabilities if technically feasible and upon QST's Bona Fide Request. QST will pay the applicable recurring and nonrecurring costs of developing, installing, providing and maintaining the requested capability.

4.1.5 Ameritech will also, upon **QST's** Bona Fide Request, provide any technically feasible customized local routing of **traffic** through Unbundled Local Switching, by class of **call** (e.g., operator, directory assistance, 9-1-1, toll, local, etc.). Ameritech **will** develop and provide any requested customized routing the switch is capable of providing upon agreement by QST to pay recurring and non-recurring costs of developing, installing, updating, providing and maintaining such custom routing.

4.1.6 Ameritech provides, on an optional basis, the ability to connect line-side ports and/or trunk-side ports within the same switch with a group of common attributes. An example is a request for Unbundled Local Switching to provide a **Centrex** service with intercom calling within the system and with certain common features. The attributes available include intercom calling, group **call**



pick-up, and Automatic Route Selection (**ARS**). Intercom calling is defined as the ability of the line-side ports to call one another by dialing 3-7 digits. Group call pick-up is defined as allowing one line-side port to answer a call directed to another line-side port in the same call pick-up group. **ARS** is defined as the ability to route calls to a specific group of trunk-side ports.

4.1.7 Normally, Ameritech will switch **traffic** through its local switching element in accordance with Ameritech standard switching translations and screening in use in that switch. The custom routing optional feature enables QST to specify special routing, by class of call, of some or all traffic coming into its unbundled local switch using any technically feasible routing capability of that switch. Variations in the End-Office switching equipment used to provide service in specific locations may cause differences in the operation of certain features. Special routing capabilities that are not otherwise available (i.e., features that the switch is capable of providing) will be developed on an individual-case basis through the Bona Fide Request process and will be installed, updated maintained and provided following QST's agreement to pay the applicable **costs**.

#### 4.2 Provisioning of Unbundled Local Switching.

The following coordination procedures shall apply for conversions of "live" Telephone Exchange Services to unbundled Network Elements:

4.2.1 QST shall request Unbundled Local Switching from Ameritech by delivering to Ameritech a valid electronic transmittal service order (a "**Service Order**") using the electronic interface described on Schedule 9.2.6. In addition, pre-ordering functions are supported via electronic data interchange (**EDI**) format as utilized for Resale Services. Within forty-eight (48) hours of Ameritech's receipt of a Service Order, Ameritech shall provide QST the FOC date by which the Unbundled Local Switching ports covered by such Service Order will be installed.

Where connection of the Unbundled Local Switching port(s) to customized routing is required by QST, the specific custom routing pattern desired must already exist. In those instances where the custom routing pattern does not already exist, QST may request the development and establishment of such custom routing pattern via a Bona Fide Request. While the custom routing pattern is being developed QST may do one of the following: (a) defer activation of the Unbundled Local Switching port until the routing pattern is established, (b) offer the Customer resale on an interim basis, or (c) convert the existing basic **office** routing pattern. If QST elects option (c) and later desires to convert the Unbundled Local Switching port using Ameritech's office routing pattern to a customized routing pattern, an additional Line Connection Charge will apply.

4.2.2 Ameritech agrees to coordinate with QST at least forty-eight hours prior to the due date a scheduled conversion date and time (the "**Scheduled**

Conversion **Time**") in the "A.M." (12:00 midnight to 12:00 noon) or "P.M." (12:00 noon to 12:00 midnight) (as applicable, the "LS Conversion Window").

For subscriber conversions requiring coordinated cut-over activities, on a per-order basis, Ameritech and QST will agree on a scheduled conversion time, which will be on a designated date.

4.2.3 Not less than one (1) hour prior to the Scheduled Conversion Time, either Party may contact the other Party and unilaterally designate a new Scheduled Conversion **Time** (the "New Conversion Time"). If the New Conversion Time is within the **LS** Conversion Window, no charges shall be assessed on or waived by either Party. If, however, the New Conversion Time is outside of the **LS** Conversion Window, the Party requesting such New Conversion Time shall be subject to the following:

If Ameritech requests the New Conversion Time, the applicable Line Connection Charge shall be waived; and

If QST requests the New Conversion Time, QST shall be assessed a Line Connection Charge in addition to the Line Connection Charge that will be incurred for the New Conversion Time.

Ameritech will notify QST when conversion is complete.

4.2.4 Except as otherwise agreed by the Parties for a specific conversion, the Parties agree that the time interval expected from disconnection of "live" Telephone Exchange Service to the connection of an unbundled Network Element at the QST Collocation interface point will be thirty (30) minutes or less. If a conversion interval exceeds thirty (30) minutes and such delay is caused solely by **Ameritech** (and not by an QST contributing Delaying Event), Ameritech shall waive the applicable Line Connection Charge for such element.

If QST has ordered INP with the installation of a Loop, Ameritech will coordinate the implementation of **INP** with the Loop conversion during the thirty (30)-minute interval at no additional coordination charge (other than the applicable standard service order and line connection charges).

Ameritech shall provide QST the functionality of blocking calls (e.g., 900, 976 international calls) by line or **trunk** on an individual switching element basis.

4.2.5 When ordering a Local Switching Element, QST may order from Ameritech separate **interLATA** and **intraLATA** capabilities (i.e., 2 **PICs** where available) on a line basis.

4.2.6 Unless otherwise directed by QST, and to the extent technically feasible, when QST orders a Network Element or Combination, all pre-assigned trunk or

telephone numbers currently associated with that Network Element or Combination shall be retained without loss of feature capability.

#### **4.3** Tandem Switching.

4.3.1 Tandem Switching creates a temporary transmission path between **interoffice** trunks that are interconnected at a switch for the purpose of routing a **call** or calls. Unbundled Tandem Switching is ordered using electronic interfaces. Trunk side ports are ordered using the Access Service Request ("**ASR**"), which provides for electronic ordering based on industry standards adopted through OBF. ASR is the process used as of the Effective Date to order Exchange Access Services. Both pre-ordering and ordering functions and access to associated Operations Support Systems functions are supported electronically through these interfaces.

4.3.2 Ameritech will service, operate, and maintain the unbundled Tandem Switching for QST at parity with the service, operation, and maintenance Ameritech provides to itself, its subsidiaries, Affiliates and any other person. Unless requested otherwise, where applicable and technically feasible, Ameritech will provide unbundled Tandem Switching using the same specifications, interfaces, parameters, intervals, procedures and practices it uses to provide comparable Tandem Switching for all other Customers and carriers. Any feature or function existing in the Tandem Switch will be provided to QST on a non-discriminatory basis. Congestion control and overflow routing will be provided on a non-discriminatory basis.

4.3.3 Tandem Switching performance will be measured to ensure parity with **all** other Telecommunications Carriers that are interconnected with Ameritech. Performance will be measured on switching, call recording, and network management controls.

4.3.4 Switch downtime will be measured through FCC reportable incidents report. CPI Index will be measured through calls blocked and customer out of service incidents.

4.3.5 Electronic Billing Accuracy Centers (EBAC) measures billing errors from the CABS error hold file **report**. Ameritech employs **RAVE/A&T**, which enables on-line investigation of AMA volumes and will alert BBAC to possible AMA recording failures.

4.3.6 Congestion Control and overflow criteria are set by the use of NTMOS Surveillance system which polls **EDAS** and NMA data on call volumes and **make-busy** standards. Ameritech sets automatic thresholds with preplan routing and overflow selection. The system is also monitored via a manual surveillance system early recognition of performance problems.

## 5.0 Interoffice Transmission Facilities.

Ameritech shall:

5.1 Provide QST exclusive use of Interoffice Transmission Facilities dedicated to QST, or use of the features, functions, and capabilities of Interoffice Transmission Facilities shared by more than one Customer or carrier, including QST;

5.2 Provide all technically feasible transmission facilities, features, functions, and capabilities that QST could use to provide Telecommunications Services;

5.3 Permit, to the extent technically feasible, QST to connect such interoffice facilities to equipment designated by QST, including QST's Collocated facilities; and

5.4 Permit, to the extent technically feasible, QST to obtain the functionality provided by Ameritech's digital cross-connect systems separate from dedicated transport.

## 6.0 Signaling Networks and Call-Related Databases

### 6.1 Signaling Networks.

6.1.1 If QST purchases Switching Capability from Ameritech, Ameritech shall provide access to its signaling network from that switch in the same manner in which Ameritech obtains access to such switch itself. In addition, Ameritech shall provide QST access to Ameritech's signaling network for each of QST's switches when QST uses its own switching facilities. This connection shall be made in the same manner as Ameritech connects one of its own switches to an STP. Notwithstanding the foregoing, Ameritech shall not be required to unbundle those signaling links that connect Service Control Points to **STPs** or to permit QST to link its own **STPs** directly to Ameritech's switch- or call-related databases.

6.1.2 If QST has its own switching facilities, Ameritech shall provide QST access to **STPs** to each of QST's switches, in the same manner in which Ameritech connects one of its own switches to an **STP**, or in any other technically feasible manner (e.g., bringing an "A" link from QST's switch to QST's STP, or **linking** QST's switch to its own **STP** and then connecting that **STP** to QST's STP via a "B" or "D" link); provided that Ameritech shall not be required to (i) unbundle the signaling link connecting **SCPs** to **STPs**, (ii) permit direct linkage of QST's own **STPs** to QST's switch- or call-related databases or (iii) unbundle an SCP from its associated STP.

6.1.3 **The** Parties shall agree upon appropriate mediation facilities and arrangements for the Interconnection of their signaling networks and facilities, as necessary to adequately safeguard against intentional and unintentional misuse of the signaling networks and facilities of each Party. Such arrangements shall provide at a minimum:

- Certification that QST's switch is compatible with Ameritech's **SS7** network;
- Certification that QST's switch is compatible with Ameritech's **AIN** SCP;
- Certification that QST's switch is compatible with a desired **AIN** application residing on Ameritech's SCP;
- Agreement on procedures for handling maintenance and troubleshooting related to **AIN** services;
- Usage of forecasts provided by QST, so that Ameritech **can** provide sufficient **SS7** resources for QST and all other requesting carriers;
- Mechanisms to control signaling traffic at agreed-upon levels, so that Ameritech's **SS7** resources can be fairly shared by all requesting carriers;
- Mechanisms to restrict signaling traffic during testing and certification, as necessary to minimize risks to the service quality experienced by Customers served by Ameritech's network and those of other carriers while compatibility and interconnection items are verified; and
- Mechanisms to ensure protection of the confidentiality of Proprietary Information of both carriers and Customers.

## 6.2 Call-Related Databases.

6.2.1 For purposes of switch query and database response through a signaling network, Ameritech shall provide QST access to its call-related databases, including the Line Information Database, Toll-Free Calling database, downstream number portability databases, and Advanced Intelligent Network databases by means of physical access at the STP linked to the unbundled database.

6.2.2 If QST purchases Unbundled Local Switching, QST may, upon request, use Ameritech's SCP in the same manner, and via the same signaling links, as Ameritech. If QST has deployed its own switch, and has linked that switch to Ameritech's signaling system, QST shall be given access to Ameritech's SCP in a manner that allows QST to provide any **call-related**, database-supported services to Customers served by QST's switch. If the Implementation Team is unable to agree in the Implementation Plan to appropriate mediation mechanisms with respect to access to the **AIN SCPs**, the Parties shall adopt the mechanisms adopted by the Commission. Ameritech **shall** provide QST access to call-related databases in a manner that complies with the **CPNI** requirements of Section 222 of the Act.

6.2.3 The Parties shall agree upon appropriate mediation facilities arrangements for the Interconnection of their signaling networks, databases, and associated

facilities, as necessary to adequately safeguard against intentional and unintentional misuse of the signaling networks and facilities of each Party. Such arrangements shall provide for at a minimum:

- Capabilities to protect each Party's information;
- Agreements on handling maintenance and troubleshooting related to AIN services:
- Usage forecasts provided by QST so that Ameritech can provide sufficient resources for other requesting carriers, and capabilities to ensure that the Parties abide by such forecasts:
- Procedures to ensure, prior to deployment, that each service will properly operate within Ameritech's network;
- Procedures to verify proper deployment of each service in the network; and
- Mechanisms to ensure protection of the confidentiality of proprietary information of both carriers and customers.

### 6.3 Service Management Systems.

6.3.1 Ameritech shall provide QST with the information necessary to enter correctly, or format for entry, the information relevant for input into Ameritech's Service Management System ("SMS"). In addition, Ameritech shall provide QST equivalent access to design, create, test, and deploy Advanced Intelligent Network-based services at the SMS.

6.3.2 Ameritech shall provide QST with the information necessary to enter correctly, or format for entry, the information relevant for input into its SMS. Access will be provided in an equivalent manner to that which Ameritech currently uses to provide such access to itself (e.g., submitting magnetic tapes if QST inputs magnetic tapes, or through an electronic interface equivalent to that used by QST). The Implementation Team shall set forth in the Implementation Plan the terms and conditions relating to such access. If the Implementation Team is unable to agree to appropriate mediation mechanisms with respect to access to the AIN SMSs and SCEs, the Parties shall adopt the mechanisms adopted by the Commission.

6.3.3 Ameritech shall provide access to its SMS in a manner that complies with the CPNI requirements of Section 222 of the Act.

## 7.0 Operations Support Systems Functions

7.1 Ameritech shall provide QST access to Operations Support Systems functions on or before the dates set forth on the Implementation Schedule.

7.2 Ameritech shall also provide QST access to the functionality of any internal gateway systems Ameritech employs in performing the above-listed OSS functions for its own Customers. A “gateway system” means any electronic interface Ameritech has created for its own use in accessing support systems for providing any of the above-listed OSS functions.

## 8.0 Operator Services and Directory Services.

8.1 Ameritech shall provide QST access to Ameritech’s Operator Service and Directory Assistance facilities where technically feasible.

8.2 Ameritech shall provide unbundled Operator Services (“OS”) and Directory Assistance (“DA”) to QST in conjunction with Telephone Exchange Service provided to QST as a purchaser of Resale Services and as an Unbundled Local Switching Network Element or directly as a separate Network Element. A list identifying the NRA/Exchange areas of Ameritech Directory Assistance, and dependent Information Call Completion services will be provided to QST and will be updated as such DA services are provided in additional NRA/Exchange Areas.

8.3 As a facilities-based provider, QST will obtain any required custom routing and obtain or provide the necessary direct **trunking** and termination facilities to the mutually agreed-upon meet point with Ameritech facilities for access to unbundled OS and DA services. QST is responsible for delivering its OS and DA traffic to Ameritech’s operator service switch. Specifically, QST shall deliver its **traffic** direct from the End Office to the operator service switch location, and there can be no Tandem Switching for OS. The operator service location to which QST will deliver its OS or DA traffic will be determined by Ameritech based on the existing capacity of its service centers. **Ameritech will**, if technically feasible, enable QST to deliver its OS or DA traffic to the operator service switch most closely located to the **QST’s** NRA/exchange originating the call.

8.4 Ameritech will provide and maintain the equipment at its OS and DA centers necessary to perform the services under this Agreement, with the goal of ensuring that the OS and DA service meets current industry standards.

8.5 Ameritech will provide OS and DA in accordance with its then-current internal operating procedures **and/or** standards.

8.6 Ameritech **will** maintain a quality of service that will satisfy the standards, if any, established by the Commission having jurisdiction over the provision of such service. QST has the right, once **annually**, to visit each **Ameritech-owned** or -subcontracted office upon reasonable notice to Ameritech or with greater frequency by mutual consent of the

Parties. Upon request. Ameritech will provide monthly system results, including speed-of-answer, average work time and, for DA only, and abandon-from-queue measurements.

8.7 QST is solely responsible for providing all equipment and facilities to deliver OS and DA traffic to the point of Interconnection with Ameritech facilities.

8.8 QST will provide and maintain the equipment at its offices necessary to permit Ameritech to perform its services in accordance with the equipment operations and traffic operations which are in effect in Ameritech's DA and OS offices. QST will locate, construct, and maintain its facilities to afford reasonable protection against hazard and interference.

8.9 Upon request and to the extent technically feasible. Ameritech will unbundle OS and DA from resellers of its Telephone Exchange Service, and for QST, so QST can provide its own OS or DA service or obtain it from a third party. QST will acquire any required custom routing and arrange for or provide other facilities, services and Network Elements necessary to deliver its OS and DA traffic to Ameritech's designated office, or to the office of another provider, as applicable.

8.10 Upon request, and as technically feasible. Ameritech will provide, through an electronic interface, unbundled access to its databases used to provide DA and OS for purposes of enabling QST to provide its own OS or DA service, or as otherwise authorized by the FCC or the Commission. Such unbundled access to DA and OS databases is provided as is technically feasible based upon the facilities, equipment and software involved, and upon agreement by QST to pay to Ameritech its costs as defined in the Act of developing, installing, providing and maintaining such Network Element.

8.11 The Parties shall provide DA data in a form mutually agreed upon by the Parties.

8.11.1 If available, DA data shall specify whether the subscriber is a residential, business, or government subscriber and shall include, if available, all levels of indentation and all levels of information.

8.12 Specifically, upon request, Ameritech will provide, through an electronic interface, unbundled access to its DA database to permit QST to have its local exchange directory assistance listings in the areas incorporated into the database, and/or to read the DA listing (with the exception of a non-published listing) in that database for the purpose of providing its own DA service. Such unbundled access will be provided in a technically feasible manner based upon the facilities, equipment and software involved, and upon agreement by QST to pay to Ameritech its costs as defined in the Act of developing, installing, providing and maintaining such network element.

8.13 Access of resellers and QST to DA and OS of Ameritech, and the DA and OS Network Elements provided hereunder, whether provided on a bundled or unbundled basis, will, as applicable and as feasible, be provided through the standard interfaces, parameters, intervals, service descriptions, protocols, procedures, practices and methods that Ameritech provides to all Ameritech end-user customers of its DA and OS services.



Upon request, Ameritech will, as technically feasible, provide a different quality of service, upon agreement by QST to pay to Ameritech its costs of developing, installing, maintaining and repairing access to and provision of the Network Element at such quality of service.

8.14 QST will furnish to Ameritech **all** information necessary for provision of OS and DA. This information, to the extent it is identified as such, shall be treated as Proprietary Information. For OS this information includes emergency agency phone numbers, rate information (such as mileage bands and operator surcharge information), and originating screening information. QST will furnish to Ameritech **all** information necessary for provision of OS and DA.

8.14.1 To the extent that QST does not mirror Ameritech's operator surcharge rates, then Ameritech will, if technically feasible, enter **QST's** surcharge rates into **Ameritech's** rate tables, and **will** charge QST for changing those tables at the rates then charged by Ameritech for such service.

8.14.2 For DA services, QST will furnish Ameritech, ninety (90) days (or such earlier time as the Parties may agree upon) before DA service is initiated, details necessary to provide that service. This information includes listing information for the areas to be served by Ameritech and network information necessary to provide for the direct **trunking** of the DA calls.

8.14.3 QST will keep these records current and will inform Ameritech, in writing, at least thirty (30) days prior to any changes in the format to be made in such records. QST will inform Ameritech of other changes in the records on a mutually ~~agreed-upon~~ schedule.

8.15 If QST purchases OS or DA Network elements upon request and as, technically feasible, Ameritech will re-brand such OS and DA services based upon QST's agreement to pay rates that compensate Ameritech for any costs it incurs in developing, installing, providing and maintaining such rebranded service. To the extent that multiple carriers request the same branding service, such rate shall be allocated on a pro rata ~~share~~. For branding of calls, QST must provide two (2) cassette tapes of an announcement, no longer than three (3) seconds or at parity with Ameritech, for installation on each OS and DA **switch** serving QST's Customers.

8.16 Branding: Re-branding is available as follows:

- (a) Mechanized front-end branding is available for all manual and automated OS calls.
- (b) Mechanized back-end branding is available for automated calling card calls handled via ACCS.
- (c) On mechanized collect and billed-to-third calls, back-end branding is not currently available. Such calls can be manually handled and branded. If

Customer desires mechanized branding, the feature can be installed if QST pays for feature purchase and installation.

Normally, OS and DA services, both bundled and unbundled, will be branded with Ameritech's name as the provider of the service. Upon request from QST, and as technically feasible, Ameritech will re-brand OS and DA traffic from QST's telephone exchange lines, or to QST's unbundled OS or DA Network Element. Re-branded service requires that QST arrange to have the subject OS or DA traffic delivered to Ameritech's Central Office on separate trunks, which may require that it obtain custom routing, and obtain or provide such trunks and other applicable. Re-branding is provided at rates that recover Ameritech's costs of developing, **installing**, providing and **maintaining** such service.

8.17 QST will provide Ameritech during the **term** of this Agreement its DA listings. DA listings provided to Ameritech by QST under this Agreement will be used and maintained by Ameritech only for providing Telecommunications Services, and will not be disclosed to third parties. This section does not prohibit Ameritech and QST from entering into a separate agreement which would allow Ameritech to provide or sell QST's DA listing information to third parties, but such provision or sale would only occur under the terms and conditions of the separate agreement.

8.18 Ameritech will supply QST with call-detail information so that QST can **rate** and bill **the** call. This information excludes rating and invoicing of Customers, unless negotiated on an individual-case basis.